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COASTAL ZONE INFORMATION CENTER

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NASSAU-SUFFOLK REGIONAL PLANNING BOARD COASTAL ZONE MANAGEMENT PROGRAM YEAR II

VOLUME I

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COASTAL ZONE MANAGEMENT PROGRAM
NASSAU-SUFFOLK COASTAL ZONE BOUNDARIES

COASTAL ZONE
INFORMATION CENTER

Prepared by

Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787

Dr. Lee E. Koppelman
Project Director

15 June 1977

Task 1.1

Contract Number D93967

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NASSAU-SUFFOLK COASTAL ZONE BOUNDARIES (Draft 5/11/77)

Section 305(b)(1) of the Coastal Zone Management Act of 1972 requires the identification of the coastal zone subject to the State's management program.¹ The seaward boundary extends outward to the outer limit of the United States territorial sea.² For New York State, the seaward boundary is 3 miles offshore in the Atlantic Ocean on the south, and the New York-Connecticut-Rhode Island border in Long Island Sound on the north and in Block Island Sound on the east.³

The Act states that "the zone extends inland from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters".⁴ A primary inland coastal zone boundary was determined for Nassau-Suffolk based on the Regional Planning Board's decade long experience with coastal research and inventory efforts, and based on the input provided by the Citizen Participation Committee during the Year I CZM effort.⁵ This primary zone, over which the more stringent controls will be placed, is defined as the maximum area delineated by the 10 foot elevation contour line, or the line located 1000 feet inland from the Mean High Water line,

¹The Act defines the "coastal zone" to mean the coastal waters and adjacent shorelands strongly influenced by each other and in proximity to the shorelines of the State (PL 92-583 Section 304(a)).

²See PL 92-583 Section 304(a)

³See Office of Coastal Zone Management, NOAA "Boundaries of the Coastal Zone" May 1975, pp 4-8. Congressional consent for the seaward lateral boundary compact (Jan. 10, 1925) between N.Y. and Conn. is contained in 43 Stat. 731.

⁴PL 92-583 Section 304(a)

⁵See Nassau-Suffolk Regional Planning Board "Coastal Zone Planning Elements: Goals and Boundaries" Jan. 1976

the line located 1000 feet from the banks of any stream, ditch, or drainage way discharging to coastal waters, and the outer periphery of any contiguous freshwater wetland (as identified pursuant to the NYS Freshwater Wetlands Act of 1975).⁶ This boundary was found to adequately cover shorelands, the uses of which are most likely to have direct and significant impacts upon coastal waters, including wetlands, protective upland vegetation, the barrier beach and other coastal landforms, the 100 year flood plain, areas characterized by high groundwater table, bluffs and steep slopes, freshwater wetlands, stream corridors, and major drainage ways or swales carrying surface runoff into coastal waters.

However, other areas, the uses of which may have a direct and significant impact on coastal waters, are not encompassed by the definition of the primary coastal zone. For example, areas within coastal drainage basins or watersheds but outside of the primary zone may generate stormwater runoff that can pollute coastal receiving waters. Similarly, areas beyond the primary zone boundary may produce leachates (from cesspools and sumps) that can pollute shallow groundwater aquifers that discharge (through streamflow and underflow) to nearshore coastal waters.⁷ In addition, areas far back from the marine edge

⁶ Regulations covering the Act indicate the acceptability of a boundary which is delineated by a strip of land of uniform depth (e.g. 250 feet, 1000 yards, etc.) with the condition that any such boundaries include and be limited approximately to those lands which have any existing, projected or potential uses which would have a direct and significant impact upon coastal waters (15 CFR 923.11 (b)(1)).

⁷ Nassau-Suffolk Regional Planning Board, "The Status and Potential of the Marine Environment", Dec. 1966, pg 3-12. "The role of groundwater in the nitrogen budget of individual bays is quite pronounced" (Marine Sciences Research Center, SUNY at Stony Brook "Characteristics and Environmental Quality of Four North Shore Bays, Nassau and Suffolk Counties, L.I., N.Y." Jan. 1972, Technical Report Series #14). Subsurface flow is the largest nitrogen input to Great South Bay (see Adelphi University Institute of Marine Science, "An Assessment of the Water Quality Characteristics of Great South Bay and Contiguous Streams" Feb. 1973, Garden City, L.I., N.Y.).

may be visible from the water or located within other scenic coastal vistas (e.g., on Long Island's north shore and east end), and their alteration or use can significantly impact coastal aesthetics.⁸

Therefore, a secondary coastal zone was determined for Nassau-Suffolk that includes those areas outside of the primary zone that may have direct and significant water quality or aesthetic impacts on coastal waters.⁹ The secondary coastal zone consists of the drainage basins of north shore embayments and open coastline that were identified as part of the "208" Area-wide Waste Treatment Management Planning Study conducted by the Regional Planning Board.¹⁰ The secondary coastal zone also includes the entire north and south forks on Long Island's east end, and those areas bounded on the east and west by stream corridors on Long Island's south shore. In addition, the secondary zone includes the critical watersheds of Long Island's four major rivers (Nissequogue, Peconic, Carmans, Connetquot). The secondary coastal zone does not include large areas

⁸Impacts upon coastal waters can include aesthetic characteristics (sensory experiences), see OCZM, NOAA, "Threshold Paper #2: Land and Water Uses", pg 3.

⁹The office of Coastal Zone Management has identified as acceptable the use of multiple boundaries or a tiered approach (e.g., based on biophysical differences) in the delineation of the coastal zone, and the application of different levels of control (see OCZM, NOAA, "Boundaries of the Coastal Zone" May, 1975, pp 6-7; also OCZM, NOAA, "Threshold Paper #1: Boundaries" pp 7-8).

¹⁰The States are encouraged to take early and continuing account of existing Federal and State land/water use and resource planning programs in determining their coastal zone (15 CFR 920.11). The Office of Coastal Zone Management has identified a variety of criteria for selecting an inland coastal zone boundary, including the use of a biophysical boundary defined in terms of natural biological, geological, or physical features, or a combination thereof. Those features can include drainage basins, flood plains, dune formations, ecosystems, ridges of coastal mountain ranges, etc. Once appropriate biophysical delimiting features are identified, any number of political boundaries, (e.g., county, township, municipal lines, SMSA's, etc.), cultural features (e.g., highways, roads, canals, etc.), property lines, or existing designated planning and environmental control areas, may serve as approximations of the selected biophysical features (see OCZM, NOAA, "Boundaries of the Coastal Zone" May 1975, pp 2-5; also OCZM, NOAA, "Threshold Paper #1; Boundaries", pg 7).

of Long Island's central spine that have only indirect hydrologic connections with coastal waters and that do not affect coastal aesthetics.

The inland boundary of the secondary coastal zone is approximated, wherever possible, by major cultural features.¹¹ The northern boundary follows the Long Island Expressway, State Route 25A, Long Island Railroad (Oyster Bay and Port Jefferson lines), and Sound Avenue. The eastern boundary includes Church Lane and Riverhead-Quogue Road. The southern boundary follows State Route 27 (Sunrise Highway) and Southern State Parkway.¹² The critical watersheds of the four major rivers extend inland beyond these major cultural features and are approximated by lesser roads and jurisdictional boundaries.

¹¹See Footnote 10.

¹²In those cases along the southern boundary where the heads of small streams extend north of the Sunrise Highway or Southern State Parkway, the primary and secondary boundaries are coincident.

**COASTAL ZONE MANAGEMENT PROGRAM
CRITERIA USED FOR THE DELINEATION OF GEOGRAPHIC AREAS
OF PARTICULAR CONCERN**

Prepared by

**Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787**

**Dr. Lee E. Koppelman
Project Director**

15 June 1977

Task 2.1

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Geographic Areas of Particular Concern

Section 305(b)(3) of the Coastal Zone Management Act, Sections 920.13 and 920.16 of the Regulations, (15CFR920, 38FR33044, November 29, 1973; amended by 40FR16832, April 15, 1975) and NOAA's Threshold Paper #3--all address the important topic of "geographic areas of particular concern". The Threshold Paper, the only document that provides a definition of the term "geographic areas of particular concern" suggests that they are land and water areas that 1) have boundaries that have been or can be clearly delineated; 2) contain the site or sites of natural resources or human artifacts and activities of more than local interest; and 3) face developmental pressures or competing demands that require state or local governmental intervention; including, where necessary, the expansion of planning and regulatory capability and authority.

The legislation and regulations indicate that there are certain land and water uses and activities that should be regulated or, on occasion, prohibited because of their direct and significant impact on coastal waters. However, in addition to these uses and activities that are to be subject to some degree of management throughout the coastal zone, there are a number of specific geographic areas where natural features, environmental processes, man's works, or existing and potential economic and recreational opportunities merit further protection, preservation or enhancement.

The list of resource types to be considered eligible for G.A.P.C. status covers a broad range of related and often overlapping categories. It comprises not only areas of significant natural value but also "transitional or intensely developed areas where reclamation, restoration, public access and other actions are especially needed; and those areas especially suited for intensive use or development". The legislation and guidance identify eight general resource classifications which can be interpreted to include almost every kind of area

within the coastal zone. The eight classes are as follows:

"(1) Areas of unique, scarce, fragile or vulnerable natural habitat, physical feature, historical significance, cultural value, and scenic importance;

(2) Areas of high natural productivity or essential habitat for living resources, including fish, wildlife, and the various trophic levels in the food web critical to their well-being;

(3) Areas of substantial recreational value and/or opportunity;

(4) Areas where developments and facilities are dependent upon the utilization of, or access to coastal waters;

(5) Areas of unique geologic or topographic significance to industrial or commercial development;

(6) Areas of urban concentration where shoreline utilization and water uses are highly competitive;

(7) Areas of significant hazard if developed, due to storms, slides, floods, erosion, settlement, etc; and

(8) Areas needed to protect, maintain or replenish coastal lands or resources, such areas including coastal flood plains, aquifer recharge areas, sand dunes, coral and other reefs, beaches, offshore sand deposits and mangrove stands".

Preliminary analysis of the above criteria clearly indicated that literal application to the Long Island coastal zone would yield an unmanageably large inventory of candidate areas for further evaluation. It was therefore determined to limit the initial inventory of potential G.A.P.C.'s to those areas not already subject or likely to be subject to presumably adequate management pursuant to existing state law or to the proposed land capability classification listings of permissible uses and guidelines for the establishment of priorities among permissible uses. Tidal and freshwater wetlands, ponds, flood plains, stream corridors, prime aquifer recharge areas, steep slopes, bluffs and dunes have been

regarded as second level management areas and therefore excluded from consideration for G.A.P.C. status except where they occur in conjunction with other features qualifying for such status.

In order to facilitate the rapid identification of candidate G.A.P.C.'s the staff undertook the elaboration and restatement of the federal criteria and the development of additional criteria to be used in making initial selections in each of the major categories or subcategories. The staff then proceeded to review environmental resource maps, land use maps, aerial photography and special studies, utilizing the following definitions or descriptions of the various resource types, and the selection criteria listed below in order of their importance.

Category #1

A) Unique, scarce, fragile or vulnerable natural habitat

Biotic communities displaying flora and fauna now or formerly characteristic of Long Island areas; plant associations of the dry pine barrens, of the moderately drained woodlands, of the moist bogs, swamps and freshwater wetlands, and of the salt meadows, marshes and dunes--in various states of succession; and prime habitat for birds and small fauna, especially nesting, breeding or resting areas for endangered species.

Selection criteria

1. quality: how good an example of its kind?
2. scarcity: national, state, island-wide, local
3. degree and nature of threat: none, moderate, severe; direct, indirect; imminence
4. additional benefits of preservation: environmental, i.e. aquifer recharge, sediment trap, nutrient removal; productivity contribution to food chain; educational, as living laboratory
5. national interest, if any, i.e., migratory bird treaty obligations

6. ease of management: availability of legal and institutional tools,
funding requirements

B) Unique, scarce, fragile or vulnerable physical feature

A land form or water body of significance because of its function, visual quality or scientific interest. On Long Island, this category would include barrier beaches, pocket beaches, dunes, bluffs, high peaks, eskers and kettle-holes and tombolos.

Selection Criteria

1. quality: how good an example of its kind?
2. scarcity: nationally, state, island-wide, local
3. degree and nature of threat: none, moderate, severe; direct, indirect, imminence
4. benefits expected from preservation; environmental, i.e., flood protection, minimization of erosion; aesthetic and recreational, i.e. enjoyment of scenic views and active recreation opportunities; educational or scientific, i.e. exemplars of geologic forms and processes
5. availability or potential for public access: physical, visual
6. national, statewide, or regional interest, if any
7. ease of management: availability of legal and institutional tools,
funding requirements

C) Unique, scarce, fragile or vulnerable site, structure or area of historic and/or cultural significance

Archeological sites; sites associated with historic events; buildings of unusual historic value or architectural merit; historic districts; and cultural resources, including but not limited to museums, estates, churches, campgrounds and other structures or sites illustrative of life on Long Island.

Selection Criteria

1. quality: for archeological sites, evidence of authenticity of find;
for historic sites, structures, and districts, authenticity and representativeness. How good an example of its kind? Is it listed in Long Island Landmarks or the Van Liew Register? Does it meet the criteria for inclusion in the National or New York State Registers?
for structures or districts of cultural significance, representativeness. How good an example of the various architectural and life styles of nineteenth and early twentieth century Long Island? Of the major occupations and transportation modes?
2. scarcity: national, state, local? Is the site or artifact similar to those found elsewhere or is it exclusive to Long Island? Is it the last or one of a very few examples of an architect's work, a gold coast estate, a campgrounds, or even a working farm?
3. degree and nature of threat: none, moderate, severe; direct, indirect; imminence
4. condition, including potential for restoration
5. surroundings: do they enhance or detract from the educational, aesthetic or other values associated with the site, structures, or district? What is the potential for improvement?
6. availability or potential for public access: physical, visual; opportunities for occasional or limited access
7. ease of management: availability of legal and institutional tools, funding requirements; for archeological sites, assurance that site is or can be adequately protected and that nomination will not result in destruction; for historic sites, structures, and districts and for cultural resources, opportunities for private, quasi-public or public use consonant with preservation and protection

D) Unique, scarce, fragile, or vulnerable areas of scenic importance

Segments of public roads or other public areas that afford a view or series of views encompassing harmonious combinations of land and water or of land-forms and man-made structures or human activity. Such areas might include those that provide an unobstructed view of the water from the land or a view inland, but linked to the water; a village green or a hamlet, characterized by unity of architectural style or landscape treatment; a road offering a series of views of natural features and vegetation or of well-tended farms or estates.

Selection criteria

1. quality: integrity, interest, representativeness
2. scarcity: national, state, local? Are views of this kind found elsewhere or are they exclusive to Long Island? Is it one of the last or of a very few such views available to the public in the locality or on Long Island as a whole?
3. degree and nature of threat: none, moderate, severe; direct, indirect; imminence
4. potential for enhancement of visual experience: opportunities for improvement of physical access, safety and amenities at view site; opportunities for removal or screening of "eyesores"
5. additional benefits expected from preservation: stimulus to private beautification and preservation efforts; promotion of tourism
6. ease of management: availability of legal and institutional tools, funding requirements

Category #2

Areas of high natural productivity or essential habitat for living resources, including fish, wildlife and the various trophic levels in the food web critical to their well-being.

Tributary streams, estuaries and embayments, coastal ponds; coastal fresh marsh, high marsh and low marsh, tidal mud flats; littoral zones, deep water habitats; shellfish beds, fish and wildlife concentration areas, unique ecological areas, habitats of rare, threatened, or endangered species; and urban open space suitable for wildlife habitat.

Tributary streams, estuaries and embayments, coastal ponds, coastal fresh marsh, high marsh and low marsh, tidal mud flats and littoral zones are found in numerous locations throughout the primary zone as delineated by Nassau-Suffolk. As previously indicated their ubiquitousness, the relative ease of identification, and the already completed mapping of tidal wetlands suggest level 2 (identification of permissible uses based on land and/or water capability and reliance on performance standards, where necessary) rather than level 3 (G.A.P.C.) management. Nomination as G.A.P.C.'s is considered appropriate for shellfish beds, fish and wildlife concentration areas, and urban open spaces suitable for wildlife habitat since these may require special protection in addition to that afforded by level 2 designation.

Selection criteria

Shellfish beds and fish and wildlife concentration areas

1. quality: productivity or contribution to the food chain
2. scarcity: proportion of total national, statewide or Long Island resource involved
3. vulnerability: sensitivity to environmental alteration
4. degree and nature of threat: none, moderate, severe; direct, indirect; imminence
5. other benefits, if any, to be anticipated from preservation of area
6. ease of management: availability of legal and institutional tools, funding requirements

Unique ecological areas, habitats of rare, threatened, or endangered species (see category 1A for description of applicable criteria).

Urban open spaces suitable for wildlife habitat

1. quality: is or could wildlife be attracted to the area? adequacy in terms of size, vegetation, air and water quality and quantity, noise levels
2. scarcity: local
3. degree and nature of threat: none, moderate, severe; direct, indirect; imminence
4. additional benefits expected to result from preservation or restoration: opportunities for public access for observation and/or passive recreation; neighborhood preservation or improvement, including protection of property values
5. ease of management: availability of legal and institutional tools, funding requirements

Category #3

Areas of substantial recreation value and/or opportunity

Areas now used for water dependent or water enhanced recreation; areas adjacent to and suitable for the expansion of such uses, and areas appropriate for the establishment of new recreational uses. Existing public recreation areas may, but should not necessarily be classified as G.A.P.C.'s, since "management" of publicly owned recreation areas may be limited to the preparation of guidelines for the development of state, county and local facilities.

Selection criteria

1. quality: suitability in terms of appropriateness for intended use; i.e., active or passive recreation, including but not limited to swimming, boating, fishing, picnicking, camping, field sports, hiking,

bird watching, etc.; size of site; i.e., fifty acre minimum for new facilities except boat launching ramps or fishing piers. Smaller parcels acceptable for the above, for expansions of existing facilities, or for the provision of access corridor to public lands or waters; and accessibility in terms of existing highway network and potential for service by public transportation

2. scarcity: national, regional, local? Are there alternative sites that can be used to meet identified national, regional or local recreation needs?
3. degree and nature of threat: none, moderate, severe; direct, indirect; imminence
4. additional benefits expected from reservation and/or development of area for recreational use
5. ease of management: availability of legal and institutional tools; funding requirements

Category #4

Areas where developments and facilities are dependent upon the utilization of, or access to, coastal waters

This category includes all land and water areas now accommodating or suitable for water-dependent uses and activities. Since water dependent uses should always be accorded the highest priority among permissible uses, and since there is considerable overlap between this category and categories No. 3 (Areas of substantial recreational value and/or opportunity) and No. 6 (Areas of urban concentration where shoreline utilization and water uses are highly competitive), nominations under this category should be reserved for areas not accorded sufficient protection through the establishment of priorities or not included in categories Nos. 3 and 6. Potential G.A.P.C. candidates comprise areas for water dependent uses of greater than local

significance whose site requirements limit them to a very few locations, including sites for power plants, deep water ports, ferry terminals, outer continental shelf support facilities, and commercial fishing ports with a full range of boat servicing, fish landing, processing, sales, and storage facilities.

Selection Criteria

1. importance of use: to Long Island, to the NY Region, NYS and the U.S.
2. scarcity: number of alternative sites that meet requirements for proposed use
3. quality of site: suitability for proposed use in terms of size of site, i.e., sufficient space for facility, including any ancillary uses and buffer areas where necessary; depth of water and volume of flow, where relevant; access to land transport or rights-of-way; ambient air quality and water quality as related to proposed use; and characteristics of the site, if any, that might mitigate or exacerbate adverse impacts of the proposed use
4. degree of threat: none, moderate, severe; direct or indirect, imminence
5. need for G.A.P.C. status to facilitate assembly, unified planning, and appropriate zoning of separate parcels constituting development or redevelopment site
6. ease of management: availability of legal and institutional tools, funding requirements

Category #5

Areas of unique geologic or topographic significance to industrial or commercial development

This category does not appear to pertain to Long Island. Were the bluffs northeast of Hither Hills in East Hampton the sole source of sand on Long Island or in the metropolitan area, their designation as a G.A.P.C. might

be appropriate. Similarly, were Port Jefferson Harbor or any other Long Island harbor the only access point for waterborne commerce on Long Island or in the New York area, its designation under this category might be justifiable. Inasmuch as Long Island is not presumed to have nearshore petroleum resources, phosphate deposits or other significant mineral resources, and since its harbors are not unique, this category will be dropped from further consideration.

The Port Washington sandpits on the western shore of Hempstead Harbor could be considered an Area for Preservation and Restoration or A.P.R., a subset of the G.A.P.C.'s related to this category and to categories number 1B, 1D,

3, 4, 6, & 7. See page 1 of section entitled Inventory & Description of G.A.P.C.'s for a discussion of APR's.

Category #6

Areas of urban concentration where shoreline uses are highly competitive

Portions of the coastal zone where a comprehensive, site specific management program is required to insure optimal use of the shoreline and coastal waters. Such areas are characterized by continuing competition among dissimilar and often incompatible uses and activities for sites at the land-water interface. The typical competition is between the industrial, commercial and utility uses, which often located on the shorefront in advance of urbanization, and the recreational or residential uses that now require or are greatly enhanced by a waterfront location. On Long Island, areas in this category are likely to be more extensive and varied in character than are most other G.A.P.C.'s and may encompass physical or cultural features which, if located elsewhere, would be separately identified as G.A.P.C.'s. In many cases, areas selected in category No. 6 will also be A.R.P.'s.

Selection Criteria

1. evidence of underutilization or inappropriate utilization of the shoreline and adjacent waters: obsolescence, congestion, conflicting or incompatible land uses, interference with public access to the water, and unnecessary damage to coastal resources.
2. evidence of inability of water dependent uses to outbid water enhanced or non-water related uses for shorefront sites.
3. potential for rehabilitation or redevelopment: opportunities for improvement through planned changes in land use, circulation, community appearance, and pollution control. Opportunities for optimization of the resource through appropriate use of vacant parcels, immediate or long-term removal of non-water related uses, clearance and or rehabilitation of deteriorating structures or facilities and restoration of the townscape.
4. need for G.A.P.C. status to facilitate assembly, unified planning and appropriate zoning of separate parcels and to faster relocation of non-water dependent uses
5. presence of physical or cultural feature that would qualify as a G.A.P.C. under categories Nos. 1, 2, 3 or 4.
6. national, state or metropolitan area interest, if any.

Category #7

Areas of significant hazard if developed, due to storms, slides, floods, erosion, settlement, etc.

Unstable or dynamic natural features including steep slopes, bluffs, stream banks, and bay bottom; areas subject to severe or frequent flooding, rapid shoreline erosion (greater than 6" per year), subsidence, or excessive sedimentation.

Areas characterized by the presence of significant hazards for development have been identified and included in the land and water capability classifi-

cation system, which in effect provides level 2 rather than level 3 or G.A.P.C. management. It may be useful, however, to identify as G.A.P.C.'s those areas where man's activities have so accelerated natural process as to create additional hazards to development. Areas where urban development accompanied by storm drainage facilities may cause flash floods, shore areas dependent upon structural erosion control, and coastal plain pine-oak forest subject to frequent fires seem likely candidates.

Selection Criteria

1. extent of danger: number of persons or amount of property involved
2. temporal character of threat: rare, occasional, or constant
3. ease of management: availability of legal and institutional tools; funding requirements

Category #8

Areas needed to protect, maintain and replenish coastal resources including coastal lands and waters.

The areas are of two general classes: those needed to reduce man-induced impacts upon habitats, features or processes; and those needed to permit or facilitate the reclamation of degraded habitats and features or the restoration of coastal processes. They may include such major components of the coastal zone as the barrier beach-bay system; lands submerged by tides and subject to erosion, deposition and sedimentation as a result of waves, currents, and tidal action; sources of sediment for coastal waters; the freshwater aquifer and aquifer recharge areas; and the various coastal ecosystems. The significance of most of the above mentioned areas has been recognized in the land and water capability analysis and appropriate level 2 management recommendations provided. However, in a few instances the potential benefits of site specific measures designed to protect lands and

waters adjacent to unique, scarce, fragile or vulnerable habitats or physical features, G.A.P.C. Categories Nos. 1.A and 1.B, respectively, or areas of high natural productivity or essential habitat for living resources, G.A.P.C. No. 2, may be of sufficient magnitude to warrant inclusion of discrete portions of major coastal resource components within the administrative boundaries or management area of the designated G.A.P.C.'s.

At this time there appears to be little, if any need for separate identification and designation of areas needed to reduce or preclude man-induced impacts upon coastal resources. Selection criteria are therefore presented only for those areas needed to permit or facilitate the reclamation of degraded habitats and features or the restoration of coastal processes.

Selection Criteria

1. potential for reclamation or restoration: extent to which existing degradation is reversible
2. significance of reclamation or restoration: how important is the resource or coastal process to Long Island, the State and the nation
3. other benefits, if any, that may be expected to result from the proposed action
4. degree of threat: probability and imminence of action that might directly or indirectly preclude ultimate reclamation or restoration
5. ease of management: availability of legal and institutional tools, funding requirements.

Staff application of the refined and expanded criteria to the previously assembled data sources yielded more than 100 potential nominations for G.A.P.C. status. Reference materials used in the identification of candidate areas included the Nassau-Suffolk Comprehensive Plan studies and Marine Resources Council publications; aerial photographs; U.S. Geological Survey Quadrangle Maps and U.S. Coast and Geodetic Survey Charts; New York State Tidal Wetlands

Maps and wetlands reports; the New England River Basins' Long Island Sound Study Plan, and subject reports dealing with scenic and cultural resources, fish and wildlife, outdoor recreation, erosion and sedimentation, and marine transport; and miscellaneous federal, state, county, town and historic preservation society publications.

Initial suggestions for G.A.P.C.'s were mapped on U.S.G.S. Quad Sheets and presented to the Citizen's Participation Committee for discussion. Some additional sites were proposed and others deleted in response to C.P.C. information and comments. Existing parks and preserves were also noted on the Quad Sheets in order to clarify the relationships between potential G.A.P.C.'s and public or quasi-public properties.

The staff then undertook a further and final screening of the candidate areas, using five general criteria: the presence of multiple rather than single attributes or values warranting level 3 management; the presence of redevelopment opportunities sufficient to justify A.P.R. (Area for Preservation and Restoration) designation; national or state-wide need or significance; location adjacent to or between existing public or quasi-public holdings, and consequent ability to serve as a buffer area or connector; and the potential for successful development and implementation of management measures. Re-evaluation of the initial nominations resulted in the selection of 46 areas that are proposed for designation as G.A.P.C.'s.

The G.A.P.C. map indicates the location of the selected areas, while the G.A.P.C. Memo No. 2 describes the preliminary boundaries and characteristics of each.

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INVENTORY AND DESCRIPTION OF GEOGRAPHIC AREAS
OF PARTICULAR CONCERN**

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Geographic Areas of Particular Concern

The Nassau-Suffolk Regional Planning Board expects to propose the designation of the candidate sites described below as Geographic Areas of Particular Concern. The sites, which are keyed to the accompanying location map, are numbered in clockwise order, commencing in northwestern Nassau and proceeding around Long Island back to the Nassau-New York City line.

There are numerous G.A.P.C.'s or portions of them that might be categorized as A.P.R.'s or Areas for Preservation and Restoration. Inasmuch as NOAA in Threshold Paper No. 2 has characterized A.P.R.'s as a sub-class of G.A.P.C. and the Nassau-Suffolk G.A.P.C. selection procedures include the two basic steps for A.P.R. selection prescribed in 15 C.F.R. 923.16 (b)(i,ii), and inasmuch as a large proportion of the candidate sites offer some opportunities for preservation or restoration, separate designation of A.P.R.'s for Long Island does not appear warranted. The need and/or potential for preservation and restoration is identified, where appropriate, in the portion of the text dealing with the importance or significance of the proposed sites.

The boundaries indicated for each site are necessarily preliminary. It is assumed that final boundaries would be established and specific management measures developed as part of the "306" work.

1 UDALLS COVE

Boundaries:

From a point on Little Neck Bay at the south boundary of the Village of Great Neck Estates Village Park, east along the park boundary to Shore Drive, south along Shore Drive, Juniper Drive, Laurel, and Hazel Drive to the end of Hazel Drive, south along a line projected from Hazel Drive to Amherst Road, south and east along Amherst Road to Cutter Mill Road, southeast along Cutter Mill Road to Water Mill Lane, west along Water Mill Lane to the north boundary of the site of the Great Neck Terrace Apartments, west along the north boundary of site of the Great Neck Terrace Apartments to the New York City - Nassau County line, northwest along the New York City - Nassau County line to Little Neck Bay, and northeast across Little Neck Bay to the point of beginning.

Importance:

The delineated area constitutes the Nassau County portion of a larger G.A.P.C. that includes land in New York City. It contains wetlands that provide wildlife habitat in an urban and suburban setting, and adjacent buffer areas where land uses and land management practices can be expected to affect the continued viability of the wetlands.

2 MANHASSET BAY

Boundaries:

From a point on the west shore of Manhasset Bay due west of the Village of Plandome Heights - Town of North Hempstead boundary on the east shore of Manhasset Bay, east across the Bay, and along the boundary to a point north of Shoe Road, south to and along Shore Road to the Long Island Railroad, west along the Long Island Railroad to East Shore Road to a point due west of the point of beginning, and east to the point of beginning.

Importance:

The area, which now contains oil tanks and utilities that may become obsolete, offers significant opportunities for waterfront redevelopment. The eventual removal of non-water dependent uses would permit the linear extension of an existing park to provide increased pedestrian access to the shore and the expansion of boating and other recreation related facilities.

3 SHEETS CREEK

Boundaries:

From a point on the west shore of Sheets Creek Channel at Manhasset Avenue, northeast along Manhasset Avenue to New Shore Road, southeast along New Shore Road to Pleasant Avenue to Harbor Road, southwest along Harbor Road to Shore Road, south on Shore Road to Main Street, west along Main Street to the North Hempstead Town Dock, northwest across Manhasset Bay to a point on the shore directly south of the end of Sagamore Hill Drive, north to and along Sagamore Hill Drive to Manhasset Avenue, and northeast along Manhasset Avenue to Sheets Creek Channel.

Importance:

The area includes a mix of industrial, extractive, recreational and residential uses. There are opportunities for waterfront redevelopment including the expansion of pedestrian access and of boating and other water related recreation facilities as oil receiving and storage, the sand mine and other non-water dependent are phased out.

4 PORT WASHINGTON SAND PITS - ROSLYN AREA

Boundaries:

From the northwest rim of the sand pits, north and east along the run to West Shore Drive, northeast along West Shore Drive to the southern boundary of the Village of Sands Point, northeast along the village boundary to Hempstead Harbor, south along the west side of the Harbor to the northern boundary of the Village of Roslyn, east across the Harbor and along the village boundary to Bryant Avenue, south along Bryant Avenue and East Broadway to Northern Boulevard, southwest along Northern Blvd. to Main St., north along Main Street to the intersection of Old Northern Blvd. and West Shore Road, north on West Shore Road to the north boundary of the Village of Flower Hill, west and north along the Village line to the east end of Wakefield Avenue, and north along the west rim of the sandpit to the point of beginning.

Importance:

The approximately 1,000 acre sandpit tract constitutes the major redevelopment opportunity on Long Island. Cessation of mining activities and the relocation of solid waste disposal facilities would permit rehabilitation of a blighted area and re-use for public recreation, recreation related business and commercial uses. Removal of the oil receiving and storage facilities in the Roslyn portion of the area would permit redesign of the upper Harbor to facilitate wetlands preservation and pedestrian access to the waterfront, enhance the visual quality of the area and provide a more appropriate setting for the historic district.

5 GLEN COVE CREEK

Boundaries:

From a point on the east shore of Hempstead Harbor at the southern boundary of Garvie\$ Point Preserve, east and south along the boundary of the Preserve to Garvie\$ Point Road, east and northeast along Garvie\$ Point Road to Herbhill Road, northeast along Herbhill Road to Charles Street, south along Charles Street to Glen Cove Avenue, south along Glen Cove Avenue to Shore Road (Boulevard), southwest along Shore Road to the Sea Cliff Village line, and northwest along the Sea Cliff Village line and across Hempstead Bay to the southwest corner of the Garvie\$ Point Preserve.

Importance:

Redevelopment of this unattractive inefficiently utilized waterfront area would permit the expansion of recreational, recreation-related commercial and residential uses without displacement of water dependent industrial uses, and would complement urban renewal efforts in the nearby downtown area of the City of Glen Cove.

6 LATTINGTOWN SHORE

Boundaries:

From a point on Long Island Sound at the east boundary of the Lattingtown Village Park, east along the shore of Long Island Sound to a point at the west boundary of Oyster Bay Beach (Stehli's Beach), south along the west boundary and east along the south boundary of the Beach to Bayville Road, south along Bayville Road to a point 2,000' from Long Island Sound, west along a line 2,000' south of Long Island Sound to East Beach Drive, and north to Long Island Sound.

Importance:

The area contains existing developed recreational facilities, wetlands, and prime wildlife habitat. There are severe erosion problems, and, according to the Long Island Sound Study, opportunities for the restoration and expansion of beaches through beach nourishment.

7 OYSTER BAY

Boundaries:

From the northeast corner of Beekman Town Beach, east along the south shore of Oyster Bay Harbor to a point on the shore due northeast of the end of South southwest to and along South Street Street/to West Main Street to the Long Island Railroad, east along the Long Island Railroad to the east boundary of Beekman Town Beach and north along the east boundary of Beekman Beach to the Long Island Sound.

Importance:

The delineated area includes a section of the shoreline of the hamlet of Oyster Bay and adjacent lands currently occupied by a wide variety of uses, including oil receiving and storage facilities, an old shipyard, a town park and dock, a railroad station, the Town Hall, miscellaneous businesses, and residences. There are opportunities for redevelopment that would combine the retention of water dependent industrial uses with the rehabilitation and preservation of historic structures, the expansion of recreational boating facilities and the improvement of physical and visual access between the harbor and the downtown business area.

8 COLD SPRING HARBOR

Boundaries:

From a point on the west side of Cold Spring Harbor and the north side of the sandbar opposite the north end of Bungtown Road, south along Bungtown Road to Route 25A, east along Route 25A to the northwest corner of the site of the fish hatchery, south along the west boundary of the fish hatchery and along a line extending due south to Stillwell Road, east along Stillwell Road to Harbor Road, north along Harbor Road to Lawrence Hill Road east along Lawrence Hill Road for a distance of 100', northerly and easterly along a line 100' to the east and south of Route 25A (Harbor Hill Road and Main Street) to Turkey Lane, north along Turkey Lane to and across Route 25A to a point 200' north of Route 25A, west along a line 200' north of Route 25A to Shore Road, north along Shore Road to the south boundary of the

Village of Lloyd Harbor, west along the boundary to the east shore of Cold Spring Harbor, and southwest across the Harbor to the point of beginning.

Importance:

The area is unusually scenic, offering outstanding views of both the natural and man-made environment. There are extensive wetlands, prime wildlife habitat, an historic area, and recreational boating facilities. Removal of an intrusive industrial use, the oil receiving and storage facility, would permit the expansion of recreational opportunities and the enhancement of the visual quality of the area.

9 HUNTINGTON HARBOR

Boundaries:

From the east boundary of Gold Star Beach and West Shore Road, east and south along West Shore Road to Creek Road, east along Creek Road to New York Avenue, north along New York Avenue to the south boundary of the Village of Huntington Bay, west along the Village boundary to the Harbor and across the Harbor to the northeast corner of Gold Star Beach, and south along the east boundary of the Beach to West Shore Road.

Importance:

The delineated area encompasses valuable scenic and recreation resources. Roads along both sides of the harbor provide easy access to scenic views. There are opportunities for the expansion of the existing recreational boating facilities and the preservation of natural areas. The area contains oil receiving and storage facilities, stone docks, and the Huntington Sewer District.

10 EATON'S NECK

Boundaries:

From a point on Long Island Sound at the northwest corner of the Village of Asharoken, northeast and southeast along the shore except in the vicinity of the U. S. Coast Guard Station where the line follows the land perimeter of the federal holding to the east boundary of the village, south along the east boundary of the village and along a line extended therefrom to the intersection of Eaton's Neck Road and Asharoken Avenue, west along Eaton's Neck Road and across Northport Bay to the west boundary of the Village of Asharoken and north along the village boundary to Long Island Sound.

Importance:

The area, a relatively inaccessible promontory, contains a protected harbor, beaches, and wetlands and woodlands that provide excellent wildlife habitat. There are erosion and serious tidal flooding problems.

11 FRESH POND

Boundaries:

From a point on the shore of Long Island Sound at Makamah Road, east along the shore to the Huntington-Smithtown line, south along the Huntington-Smithtown line to Fresh Pond, east and south along the shore of Fresh Pond to Breeze Hill Road and Fresh Pond Road, north along Fresh Pond Road to a point 50' south of Long Island Sound, west along a line 50' south of Long Island Sound to the eastern boundary of Indian Hills Country Club, south, west and north along the perimeter of the club to a point 50' south of Long Island Sound, on the west side of the club, west along a line 50' south of Long Island Sound to Makamah Road, and north to Long Island Sound.

Importance:

The delineated area constitutes a connector or link between two shore-front parks. It contains an existing golf course, beach frontage, and wetlands and a fresh water pond that provide high quality wildlife habitat. There are problems of beach erosion and of upland erosion and sedimentation.

12 NISSEQUOGUE

Boundaries:

From a point on the shore of Long Island Sound at Dock Road, east across the mouth of the Nissequogue River to a point on the shore opposite the north end of Boney Lane, south and east along Boney Lane to Horse Race Lane, south along Horse Race Lane to Moriches Road, east along Moriches Road to River Road, south along River Road to a point due east of the south boundary of the Smithtown Landing Country Club, west across the Nissequogue River to the southeast corner of the Smithtown Landing Country Club, north along the west shore of the River to the intersection of Walnut Road and Dock Road, west along Dock Road to Riviera Drive, west along Riviera Drive to Birch Road, south along Birch Road to St. Johnland Road, west along St. Johnland Road to the east boundary of the Kings Park Psychiatric Center, around the perimeter of the Kings Park Psychiatric Center to Old Dock Road, and northeast along Old Dock Road to the Long Island Sound.

Importance:

The area includes the northernmost portion of the proposed and partially completed Nissequogue River - Connetquot River Greenbelt. It contains wetlands and prime wildlife habitat, scenic views, existing swimming facilities at Short Beach and San Remo, and a New York State Hospital, the Kings Park Psychiatric Center. The hospital sewage treatment plant has already been turned over to Suffolk County, which is continuing to operate and may eventually find it necessary to expand the facility. There is concern over the ultimate disposition of the hospital property, which comprises 670 acres of land, aging structures, a water tower and a sanitary landfill. The River is presently used for boating and fishing; however, access to the water related recreation resources of the Nissequogue and Long Island Sound could be much increased by the provision of a public boat launching ramp and proposed marina facilities. There are problems of erosion along the Long Island Sound shorefront and problems of siltation near the mouth of the River.

13 Stony Brook Harbor

Boundaries:

From a point on Long Island Sound at the northwest corner of Long Beach, east along the Sound and across the mouth of Stony Brook Harbor, north along the shore of West Meadow Beach to the south boundary of the Village of Old Field, east along the Village boundary to the westerly boundary of the Old Field Club, south along the east side of West Meadow Creek to a point 200' southeast of Christian Avenue, southwest along a line 200' southeast of Christian Avenue and Main Street to the junction with Route 25A, west along Route 25A and a line projected therefrom to the east boundary of the Village of Head of the Harbor, north and west along the east boundary of the Village to the west shore of Stony Brook Harbor, north along the Harbor to the west boundary of Long Beach, and north along the west boundary of Long Beach to Long Island Sound.

Importance:

The area contains wetlands and wildlife habitat, historic structures and cultural facilities in a modern reconstruction of a colonial village, a beach, and boating facilities. Beach access and recreation opportunities are presently constrained by the Town of Brookhaven's practice of leasing shorefront lots at West Meadow Beach for private, often substandard, seasonal cottages. There is a controversy over channel dredging and an extraordinary demand for additional boating facilities.

14 Port Jefferson

Boundaries:

the Village of Poquott-Village of
From a point on the west side of Port Jefferson Harbor at/Port Jefferson boundary, east across the Harbor to the southwest corner of the Village of Belle Terre, east along the southern boundary of the Village of Belle Terre to the southeast corner of the Village, due south to a point 200' southeast of East Broadway, west along a line 200' south of East Broadway and West Broadway to a point due south of Beach Road, north to the intersection of Beach Road and West Broadway, north along Beach Road to Passway, northwest along a line from the end of Passway to the boundary of the Village of Poquott, and northeast along the Village boundary to the point of beginning.

Importance:

The delineated area comprises the most heavily utilized portion of one of the North Shore's most important harbors. It includes the town dock, the ferry terminal and mixed industrial and commercial uses. There are opportunities for waterfront redevelopment, particularly through the removal of oil tanks and other obsolete or non-water dependent uses and the possible relocation of the sewage treatment facility. The retention of limited industrial facilities, including stone docks and a power plant and the ferry terminal appears to be compatible with the improvement of pedestrian and vehicular access to the shore, the expansion of recreational boating facilities, the creation of an historic district, the enhancement of scenic views and the promotion of tourism.

15 Mount Sinai Harbor

Boundaries:

From the west jetty at the north end of Mount Sinai Harbor, east across the mouth of the Harbor along the shore of Long Island Sound to the east boundary of Cedar Beach, south along the east boundary of Cedar Beach to Harbor Beach Road,

east along Harbor Beach Road to Pipe Stave Hollow Road, southwest along Pipe Stave Hollow Road and along a line extended in the same direction to the shore of Mount Sinai Harbor, southwest along the shore of Mount Sinai Harbor to Shore Road, southwest along Shore Road to Bayview Avenue, west along Bayview Avenue to Crystal Brook Hollow Road, north along Crystal Brook Hollow Road a point due west of the west side of Mount Sinai Harbor, east to the Harbor and north, and northwest along the west side of the Harbor to the point of beginning.

Importance:

The area has been the subject of considerable controversy during the past several decades, as environmentalists, recreationists, and developers have fought over issues of wetlands and habitat preservation, dredging and sand-mining. The area, which is particularly scenic, contains prime wetland habitat, a beach and boating facilities. Considerable portions of the shore area have been acquired by the Town of Brookhaven. There are opportunities for the expansion of boating and passive recreation facilities. The existence of upland and littoral erosion problems indicates a need for the careful siting of structures and the utilization of appropriate land management techniques to minimize potential environmental and economic losses.

16 Shoreham-Wading River

Boundaries:

From a point on the shore of Long Island Sound at the west boundary of the property of the Long Island Lighting Company, east along the shore to Sound Road, south along Sound Road to North Wading River Road and North Country Road, south across North Wading River Road to a point 100' south of North Wading River Road, west along North Country Road to the eastern boundary of the LILCO property, south along the boundary of the LILCO property and along a line extended therefrom to Route 25A, west along Route 25A to a point due south of the southwest corner of the LILCO property, north to the southwest corner of the LILCO property, and north along the western boundary of the LILCO property to Long Island Sound.

Importance:

The area, which comprises wetlands, prime wildlife habitat, and beach frontage, includes the site of Long Island's first nuclear power plant. There are scenic views and a cluster of historic structures in the hamlet of Wading River. The 880 acre power plant site appears sufficiently large to permit the establishment of multiple uses in certain buffer areas. Swimming and boating facilities and even a ferry terminal, should one be required, can be sited and designed to minimize problems of power plant security and visitor safety.

17 Peconic River

Section "A"

Boundaries:

From a point at the easterly border of the federally owned Grumman property and the intersection of Peconic Avenue and River Road, east along River Road to Edwards Avenue for a distance of 50', east along a line 50' south of River Road to the Long Island Railroad, east along the Railroad to Forge Road, south along Forge Road to the present holdings of Suffolk County and Nugent Drive, west along Nugent Drive to South River Road, west along South River Road and Manor Road to a point due south of the southeast corner of the Grumman property, and north to and along the easterly border of the Grumman property to the point of beginning.

Importance:

The delineated area comprises an as yet unprotected portion of the Peconic River Valley. It contains freshwater wetlands and prime wildlife habitat. There is a scenic view from the Long Island Expressway and there are opportunities for the kinds of recreational activities, such as canoeing, hiking, and bird watching, that are compatible with watershed protection.

Section "B"

Boundaries:

From the intersection of Town Line Road and Swan Pond Road, east along Swan Pond Road and the south boundary of the Grumman property, south and east along the perimeter of the Grumman property to the southeast corner of the Grumman property at the north boundary of the Suffolk County parklands, west along the north boundary of the Suffolk County parklands to David Terry Street, north along David Terry Street and Wading River - Manorville Road to the intersection with Town Line Road, and north along Town Line Road to Swan Pond Road.

Importance:

The area includes Swan Pond and other ponds that constitute a significant portion of the Peconic watershed. Notwithstanding the proximity of the Calverton (Grumman) airport, for which it serves as a buffer, the area provides prime wildlife habitat. It also includes the last remaining cranberry bogs on Long Island. Major developmental constraints preclude most land uses but do permit agricultural and extensive recreational use.

18 Baiting Hollow

Boundaries:

From a point on the shore of Long Island Sound at the easterly boundary of Wildwood State Park, east along the shore of Long Island Sound to the westerly boundary of the Reeves Park subdivision, south along the boundary of the subdivision to a point 1000' south of Long Island Sound, due west to the easterly boundary of the Flagg Country Club, south, west, and north along the perimeter of the Club to a point 100' south of the edge of the bluff, west along a line 100' south of the edge of the bluff to the easterly boundary of Wildwood State Park, and north along the boundary of the Park to Long Island Sound.

Importance:

The area offers numerous existing and potential recreation opportunities. There is an existing golf course, a private camp, and a boy scout camp with developed shorefront facilities. The bluffs along the shore constitute a fragile physical feature of scenic importance, whose protection and proper management would help to preserve the integrity of adjacent farmlands. The presence of clusters of substandard seasonal housing units creates fire hazards and water and sewer problems.

19A JAMESPORT

Boundaries:

From the westerly boundary of LILCO property, eastward along the Sound to the western boundary of the Southold Town park at Mattituck Inlet, south to the top of the bluff, then west to the LILCO property, south to Sound Avenue, west to the westerly edge of LILCO property and north to the Long Island Sound.

Importance:

The area contains historic buildings, a fresh water pond and wildlife. There are erosion problems and recreation opportunities.

19B MATTITUCK INLET

Boundaries:

From the southeast corner of the Southold Town Park, east and south along Naugeles Road to the intersection with Mill Road, east along Mill Road to a point 100' west of Mattituck Creek, south along a line 100' west of Mattituck Creek to its intersection with Bayview Avenue, east across Mattituck Creek to Knollwood Lane, north along a line 100' east of Mattituck Creek to Long Island Sound, west to the northeast corner of the Town Park, and south along the eastern boundary of the Park.

Importance:

Mattituck Inlet provides access to the only protected harbor between Mount Sinai and Greenport. It is heavily used for recreational boating. There is potential for redevelopment through the removal of abandoned or obsolete industrial uses and the expansion of recreation facilities and recreation-related businesses.

20 PECONIC BLUFFS

Boundaries:

From Duck Pond Point and Long Island Sound, east to a point 4000' west

of Goldsmith Inlet, south for a distance of 1000', west along a line 1000' south of Long Island Sound to a point due south of Duck Pond Point, and north to Duck Pond Point and Long Island Sound.

Importance:

The Long Island Sound bluffs constitute a fragile physical feature of visual, environmental and recreational significance. Preservation is compatible with limited recreational development including camping on the south slopes and pedestrian access to the shore.

21 EAST MARION - DAM POND AREA

Boundaries:

From a point on Long Island Sound 2000' to the east of Rocky Point, east to a point 1000' west of Terry Point, south to Main Road, east along Main Road to Tabor Road, south on Tabor Road to Orchard Street, west along Orchard Street to a point 100' east of Orient Street, south along a line 100' to the east of Orient Street to the point of intersection with King Street, west along King Street, continuing in a westerly direction across the shore and waters of Orient Harbor to the south end of Cedar Lane, north along Cedar Lane and across Main Road to a point 100' north of Main Road, east along Main Road to a point opposite Trumans Path, and north to the point of beginning.

Importance:

This area provides some of the most outstanding scenic views to be found anywhere on Long Island. There are also numerous historic structures, most of them grouped in close proximity to one another in the hamlet of Orient. Existing recreation opportunities for beach use and boating that could be expanded through restoration of an abandoned sand mining area. Wetland areas provide habitat for wildlife.

22 ORIENT POINT

Boundaries:

From a point located at the eastern end of Main Road, north to Long Island Sound, around Orient Point to the east end of Orient State Park, north along the east boundary of the Orient State Park to Main Road, and east along Main Road to its terminus.

Importance:

The area comprises the eastern end of the North Fork and the site of the Orient Point - New London ferry terminals. It affords scenic views, and the potential for limited recreation opportunities, such as those provided by a fishing pier, and for the development of resort related commercial facilities. There are severe erosion control problems that require attention.

23 GREENPORT

Boundaries:

From Fanning Point on the southwestern side of Greenport Harbor, north along Fifth Street to Front Street (Route 25), east along Front Street, to Main Street, north along Main Street to the northern boundary of the Village of Greenport, east and south along the village boundary through Sterling Basin to Greenport Harbor, and west across Greenport Harbor to Fanning Point.

Importance:

Greenport is the major activity center for the North Fork. The delineated area contains numerous historic structures, recreational boating facilities, resort related commercial enterprises, attractive waterfront views, and the Shelter Island Ferry terminal. There are several sites that might be developed or redeveloped to accommodate on shore support facilities for outer continental shelf exploration and development; a commercial fisheries complex, including docks, a warehouse, and sales area; tourist facilities, and new residential structures.

24 ROBINS ISLAND

Boundaries:

From a point 100' seaward of the northwest corner of the Island and continuing along a line located at a distance of 100' from the shore, east to Little Peconic Bay, south to the South Race, west to Great Peconic Bay, and north to the North Race and the point of beginning.

Importance:

Natural features and relative isolation provide excellent wildlife habitat. The Island also offers scenic views and outstanding opportunities for active and passive recreation.

25 SOUTH JAMESPORT

Boundaries:

From ~~the~~ South Jamesport Avenue and the Long Island Railroad, south along South Jamesport Avenue to Peconic Bay Boulevard, east along Peconic Bay Boulevard to the New York State Boat Launching facility, south to Peconic Bay, west along Peconic Bay to West Street, north along West Street to the Long Island Railroad, and east along the Long Island Railroad to South Jamesport Avenue.

Importance:

The delineated area contains structures of historic and cultural significance including the group of houses at the old campgrounds; affords scenic views and passive recreation opportunities; and has considerable potential for the expansion of tourism and resort related business through the redevelopment of obsolete or blighted commercial facilities and seasonal houses.

26 Downtown Riverhead

Boundaries:

From a point on Nugent Drive where Nugent Drive intersects the boundary of the Suffolk County parklands, east along Nugent Drive and Route 24 to County Road 105, north along County Road 105 to the Suffolk County Golf Course and Riverside Drive, west and north along Riverside Drive to Main Street, north across Main Street to Fishel Avenue, north along Fishel Avenue to Elton Street, west along Elton Street to Roanoke Avenue to Pulaski Road, west along Pulaski Road to Raynor Avenue, south along Raynor Avenue to West Main Street, and south across the Peconic River to the point of beginning.

Importance:

The area encompasses a broad range of natural and developed sites and serves as the access corridor linking other portions of Suffolk with the nearby County Center. There are opportunities for improved pedestrian access to the River for passive recreation compatible with the protection of the River and the preservation of wetland and wildlife habitat, for harbor and downtown redevelopment, including the restoration or enhancement of scenic views or vistas, and for historic preservation.

28 FLANDERS

Boundaries:

From Reeves Bay and Bay Avenue, south on Bay Avenue to Riverhead-Hampton Bays Road (Route 24), east along Riverhead-Hampton Bays Road to the west boundary

of Sears-Bellows County Park, south along the westerly boundary of the Park to Sunrise Highway, west along Sunrise Highway to Pleasure Drive, north along Pleasure Drive to Riverhead-Hampton Bays Road (Route 24), west along Riverhead-Hampton Bays Road to a point opposite Maple Avenue, north to Reeves Bay and across Reeves Bay to the point of beginning.

Importance:

The area in its present relatively undeveloped state constitutes a prime aquifer recharge site. It provides excellent wildlife habitat and, if properly managed, could accommodate limited recreational uses, such as bird watching, hiking, and camping.

29 SHINNECOCK CANAL

Boundaries:

From the south shore of Great Peconic Bay at a point due north of the intersection of Sunrise Avenue and Newtown Road, east along the shore and across the Canal to a point 2000' east of the Canal, south along a line located 2000' east of the Canal to Shinnecock Bay, west across Shinnecock Bay to the eastern end of Argonne Road, west along Argonne Road to Lynn Avenue, north along Lynn Avenue to Montauk Highway, east along Montauk Highway to Newtown Road, north along Newtown Road to the intersection with Sunrise Avenue, and north along a straight line connecting the intersection and the point of beginning.

Importance:

The area already contains a considerable amount of recreation related development. There are outstanding views, together with significant potential for the expansion of fishing, shellfishing, boating, swimming and other recreational activities. Improvement and expansion of commercial recreation and resort facilities would provide the dual benefits of increased public access to coastal recreation resources and added income from tourism. Year-round occupancy of old, sometimes substandard seasonal homes presents a problem in portions of the area.

Current efforts to upgrade substandard housing and to promote economic development do not appear incompatible with resource preservation. However, concern about the future development of the Reservation and the extent to which tribal actions affecting land use and water quality may or may not be constrained by local and state laws and regulations suggests inclusion of the Reservation as a G.A.P.C.

30 COW NECK

Boundaries:

From a point at the confluence of Sebonac Creek and Great Peconic Bay, northeast along the shore of Great Peconic Bay and the South Race to Cow Neck Point, east along the shore of Little Peconic Bay to a point opposite the north end of North Sea Road, south along North Sea Road to Scott Road, southwest along Scott Road to the intersection of Scott and Millstone Brook Roads, west along Millstone Brook Road to Barkers Island Road, north along Barkers Island Road to Bullhead Bay, north across Bullhead Bay and through Sebonac Creek to Peconic Bay.

Importance:

The delineated area has long been regarded as a candidate for preservation and/or conservation. There are numerous scenic views and extensive areas of high quality wildlife habitat. The site has considerable potential for the development of both active and passive recreation opportunities compatible with the protection of environmental values. Should Robins Island become a park or preserve, a small portion of the Cow Neck site might serve as the southern terminus of a seasonal or limited recreational ferry service.

31 SAG HARBOR

Boundaries:

From a point on Sag Harbor Cove at the north end of Cove Road, east along

the shore of Sag Harbor Cove, southeast along the shore of Sag Harbor to the west boundary of Havens Beach, southwest along the northwest edge of the Beach and along a line extended in the same direction therefrom to its intersection with Hampton Road, northwest along Hampton Avenue, to Clinton Street, southwest on Clinton Street to Jermain Avenue, west along Jermain Avenue to Main Street, north along Main Street to John Street, west and north along John Street to the shore of Upper Sag Harbor Cove, north across Upper Sag Harbor Cove to Redwood and Cove Road, and north along Cove Road to the shore of Sag Harbor Cove.

Importance:

Sag Harbor is one of the South Fork's major activity centers. A former whaling port, it contains a whaling museum and numerous structures of historic and architectural interest. There are opportunities for waterfront redevelopment to enhance scenic views, foster historic preservation and restoration, and improve the economic base through the provision of appropriate tourist and commercial recreation facilities.

32 SHELTER ISLAND - MASHOMACK FOREST

Boundaries:

From a point on Ferry Road at the northwest corner of the property of the Nature Conservancy, east along the north boundary of the property of the Nature Conservancy to Congdon's Creek, east around the south shore of Coecles Harbor to Gardiners Bay, south along the shore of Gardiners Bay to Mashomack Point, west around Mashomack Point to Shelter Island Sound, northwest along the shore to a point 100' east of Thompson Road, northwest along a line 100' to the northeast of Irene Lane and north of Linda Road and Valley Road to Ferry Road, and north on Ferry Road to the property of the Nature Conservancy.

Importance:

The area contains prime wildlife habitat. Its preservation or limited development would complement Suffolk County conservation and preservation efforts in the nearby Northwest Harbor area.

33 NORTHWEST HARBOR - GRACE ESTATE

Boundaries:

From a point on the shore of Northwest Harbor at the northeast corner of Northwest Harbor Park, northeast along the shore to the southwest corner of Cedar Point Park, east along the south boundary of Cedar Point Park to Old Northwest Road, south along Old Northwest to Northwest Landing Road, north and west along Northwest Landing Road to the northeast boundary of Northwest Harbor Park, and northwest along the northeast boundary of the Park to Northwest Harbor.

Importance:

The delineated area constitutes the missing piece needed to connect two major county parks. Public or quasi-public acquisition or management would assure the protection and preservation of the East Hampton shoreline from the eastern end of Sag Harbor to the western end of Gardiners Bay. The upland portions of

the area contain valuable freshwater wetlands and prime wildlife habitat. An existing camp, shorefront, and other sites suitable for recreation activities indicate opportunities for establishing a mix of compatible conservation and recreation uses.

34 ACABONACK HARBOR

Boundaries:

From a point on Gardiners Bay directly northeast of the intersection of Fireplace Road and Gerard Drive, south along the shore and across the entrance to Acabonack Harbor to Louse Point, southwest along Louse Point Road to Amagansett-Springs Road, northwest along Amagansett-Springs Road to Fireplace Road, northeast along Fireplace Road to the intersection of Fireplace Road and Gerard Drive, and northeast to the place of beginning.

Importance:

The delineated area contains wetlands, prime wildlife habitat, and historic structures. There are notable scenic views from various vantage points around the Harbor and along Gardiners Bay.

Boundaries:

The boundaries are coterminous with those of the Island except at the southwest corner where they extend southwest from the east side of the southwest corner along a line immediately to the east of the series of small islands to Cartwright Island, around Cartwright Island and northeast along a line immediately to the west of the series of small islands to the west side of the southwest corner of Gardiners Island.

Importance:

The islands comprise prime wildlife habitat and historic and archeologic sites. There are scenic views and opportunities for multi-season recreation activities such as swimming, boating, hiking, camping and hunting.

36 FORT POND BAY

Boundaries:

From Rocky Point and Fort Pond Bay, east across Fort Pond Road to a point on Edgemere Street opposite the northeast corner of the freshwater pond, south along Edgemere Street to Fort Pond, west across the north end of Fort Pond to Second House Road, north on Second House Road to the Long Island Railroad, west along the Railroad to a point opposite Rocky Point, and northeast along a line connecting the Railroad and Rocky Point to Fort Pond Bay.

Importance:

Fort Pond Bay, with its deep water access, extensive undeveloped acreage, rail access and existing industrial (sand-mining) activity appears to present the best Long Island site for the establishment of support facilities for outer continental shelf exploration and development. In the event that O.C.S. support facilities are not required, the area could accommodate another energy related use such as a fossil fuel or nuclear power plant. Additional development and redevelopment possibilities include the expansion of research and development facilities, separately or in conjunction with the existing New York Ocean Science Laboratory; and the expansion and upgrading of recreation related commercial facilities.

37 Napeague

Boundaries:

Excluding all holdings of the State of New York contained within the described boundary; from a point on Napeague Bay where a north-south line drawn along the easterly boundary of the holdings of New York State intersects the shoreline of Napeague Bay, east along the Bay to the westerly boundary of Hither Hills State Park, south along the westerly boundary of Hither Hills State Park to the Atlantic Ocean, west along the Atlantic Ocean to a point 100' east of Gilbert Path, north along a line 100' east of Gilbert Path across Montauk Highway to the boundary of the land of the State of New York, and west and then east along the perimeter of the State property to Napeague Bay and the place of beginning.

Importance:

The delineated area forms a link between two State owned properties, the Hither Hills State Park and the recently acquired Napeague parcel. It presently contains scattered commercial and residential uses, including some viable and some marginal businesses, a burned out restaurant; standard and substandard seasonal houses, and town owned waterfront land that is presently leased to private individuals. Management measures are needed in order to protect the State lands from incompatible neighboring uses and to restore public access to Town lands.

38A SHINNECOCK INLET

Boundaries:

From a point on Light House Road at the southwest corner of the Ponquogue Coast Guard Station, east along the southern boundary of the United States Government land to Shinnecock Bay, southeast across Shinnecock Bay to a point on the barrier island opposite the north end of Shinnecock Road, south along Shinnecock Road to the Atlantic Ocean, west along the south shore of the barrier island to the Inlet, west across the Inlet, and continuing west along the south shore of the barrier island to a point due south of the Ponquogue Bridge, and north across the barrier island and the Bridge to the southwest corner of the Ponquogue Coast Guard Station.

Importance:

The Inlet provides access from the Atlantic Ocean to Shinnecock Bay and the Canal connecting Shinnecock Bay with Great Peconic Bay. The delineated area contains prime wildlife habitat and provides opportunities for such recreational activities as swimming, boating, fishing, and shellfishing. There is considerable potential for the expansion of recreational opportunities. In addition, there is a county-owned site suitable for the establishment of a much needed Long Island commercial fisheries receiving and transfer center. Beach erosion and inlet maintenance problems require frequent, if not continuous management.

38B SHINNECOCK INDIAN RESERVATION

Boundaries:

The boundaries are coterminous with those of the Reservation.

Importance:

The sparsely developed Reservation not only contains prime wildlife habitat, but is contiguous to water areas of equal significance to fish and wildlife.

Section "A"

Boundaries:

From the intersection of Mill Road and Main Street (Yaphank), east along Main Street to a point 200' of the intersection of Main Street and Yaphank Middle Island Road, south and east along a line 200' northeast of Main Street to its intersection with River Road, south along River Road to the Long Island Expressway, west along the Expressway to the northeast boundary of the Southaven County Park, west and south along the perimeter of the County Park, a point 200' south of the Carmans River, northwest along a line 200' south and west of the River to Mill Road, and northeast along Mill Road to Main Street.

Importance:

The area includes the proposed Yaphank Historic District, the Lower Lake, and a portion of the stream corridor. As in the case of Sections "B" and "C", it constitutes one of several discrete pieces needed to complete the Carmans River greenbelt. Section "A" offers opportunities for multiple uses with particular emphasis on passive recreation and historic preservation.

Section "B"

Boundaries:

From a point on the south side of Sunrise Highway due south of the southwest corner of Southaven Park, east along Sunrise Highway to the west boundary of the Weithen National Wildlife Refuge, south along the west boundary of the Wildlife Refuge to the Long Island Railroad, west along the Long Island Railroad to a point due south of the southwest corner of Southaven Park, and north to the south side of Sunrise Highway and the place of beginning.

Importance:

The area provides highway access to the river corridor for hiking or boating. There is an urgent need to minimize pollutant loadings from existing and potential land uses, including the duck farm, in order to protect surface water quality both in the immediate vicinity and downstream.

Section "C"

Boundaries:

From a point on the shore of Bellport Bay at the southwest corner of the Weitheim Preserve, east, south, and west along the perimeter of the property known as the Manor of St. George (Sec. 981.80, Block 1, Lot 1 of the Suffolk County Tax Map) to Bellport Bay, and north to the point of beginning.

Importance:

The area, which is particularly scenic, represents a continuation of the Carmans River greenbelt and provides public access to the shorefront at Bellport Bay. Inclusion of the Manor of St. George in the greenbelt combines historic

40 PATCHOGUE

Boundaries:

From the intersection of Waverly Avenue and Lake Street, east along Lake Street to West Avenue, south along West Avenue, to Laurel Street, east along Laurel Street to Cedar Avenue, south along Cedar Avenue to Patchogue Bay, west across the mouth of the Patchogue River to a point on the shore of Patchogue Bay due south of River Avenue, north to and along River Avenue to west Main Street to Waverly Avenue, and north along Waverly Avenue to Lake Street.

Importance:

At present, the area contains a mix of industrial, transportation, utility, residential and recreational uses. Some facilities such as the sewage treatment plant and the oil receiving and storage depot are already obsolete or likely to become so in the near future. There are a number of substandard housing units, which should be rehabilitated or removed. The area also includes the terminus of the heavily used Fire Island Ferry and the site of the proposed Fire Island National Seashore ferry terminal and ancillary buildings. There is an opportunity to guide and facilitate the redevelopment of the area to focus on essential water dependent and compatible water enhanced uses, particularly those related to water based recreation, transport, and commerce.

41 OAKDALE

Boundaries:

From a point at Montauk Highway and East Shore Road, southeast along a line connecting East Shore Road and the west boundary of the Sayville County Park, south along the Park boundary to Nicoll Bay, west, northwest along the Bay to the extension of East Shore Road, and north along East Shore Road to Montauk Highway.

Importance:

The area contains obsolete or nearly obsolete vacation homes and a large institutional use. There is a potential for redevelopment for recreational use.

42 Champlin Creek

Boundaries:

From Montauk Highway and Wingan Drive, east along Montauk Highway, to Adelheid Lane, south along Adelheid Lane to the end and thence south along a line 200' east of Champlin Creek to the mouth of the Creek, west across the mouth of the Creek to the east side of the Seatuck Preserve, north and west along the perimeter of the Preserve to a point 200' west of the Creek, north along a line 200' west of the Creek to the south end of Wingan Drive, and north along Wingan Drive to Montauk Highway.

Importance:

The area encompasses the lower portion of Champlin Creek, the immediately adjacent uplands that drain into the Creek and Great South Bay, and the associated wetlands. It provides a link between two existing wildlife preserves and offers opportunities for habitat protection and recreational boating.

43 OROWOC CREEK - ISLIP

Boundaries:

From Montauk Highway and Degnon Boulevard, east along Montauk Highway to Marvin Lane, south along Marvin Lane to Raymond Street, west along Raymond Street to the east bank of Orowoc Creek, south along the east bank of Orowoc Creek to a point on the shore midway between Great Cove Lane and Ocean Avenue Extension, northwest across the mouth of Orowoc Creek to the west bank, north along the west bank of Orowoc Creek to Comfort Street, west along Comfort Street to Degnon Street, and north along Degnon Street to Montauk Highway.

Importance:

The delineated area comprises a blighted waterfront and a trailer park. There are opportunities for rehabilitation and redevelopment to accommodate a small scale commercial fisheries landing site, including a sales area similar to that existing in Freeport; recreational boating facilities; and areas for passive recreational uses.

44 Freeport

Boundaries:

From Mill Road and South Main Street, east along Mill Road to the Merrick River, south along the Merrick River to Freeport Creek, southwest across the Creek to a point on the shore due east of the east end of East Bedell Street, west to and along East Bedell Street to South Main Street, and north along South Main Street to Mill Road.

Importance:

The area, which includes the site of the incinerator and adjacent land-fill, presents the outstanding waterfront redevelopment opportunity on the south shore of Nassau County. There are potential sites for O.C.S. support facilities, water dependent industrial uses, marine commercial uses and the possible expansion of the recreational boat launching ramp and ancillary parking facilities.

Boundaries:

From the intersection of Hampton Road and Royal Avenue, due east to the Long Island Railroad, south along the railroad for a distance of 2000', east along a line across Lawson Boulevard and Long Beach to the north boundary of the site of the Town of Hempstead refuse disposal plant, east and south along the perimeter of the disposal plant site to Barnum's Island Channel, west along the north shore of the Channel to Long Beach Road, southwest along Long Beach Road, southwest along Long Beach Road to the Long Island Railroad, north along the Long Island Railroad to the north boundary of the Village of Island Park, west along the north boundary of the Village of Island Park to Hog Island Channel, north along the east shore of Hog Island Channel and the connecting waterway to the intersection of Hampton Road and Royal Avenue.

Importance:

The area presently contains a landfill and a power plant. There is sufficient acreage for additional uses, including limited onshore support facilities for outer continental shelf exploration and development, industry and/or coal storage areas for the power plant. Recreation opportunities and access to the water could be provided through future redevelopment of the landfill.

46 Barnum IslandBoundaries:

From Austin Blvd. and Baker Court, southeast along Baker Court and a line extending therefrom to Reynolds Channel, west along the north side of Reynolds Channel to the east boundary of the Village of Island Park, north along the village boundary to the intersection of Austin Blvd. and Baker Court.

Importance:

The area comprises an existing sea plane base and recreation related business. There is a potential site for a commercial fisheries landing, storage, and sales facility as well as sites for other marine commercial uses.

It is expected that, following the Nassau-Suffolk Regional Planning Board's proposal of the above list of Geographic Areas of Particular Concern, a public hearing or hearings, and modifications of the list, if necessary, New York State will accept the designations and will incorporate them in the Nassau-Suffolk portion of the New York State Coastal Zone Management Plan. County approval will be obtained, in order to facilitate the timely implementation of necessary management recommendations.

The suggested procedure for future designation of sites not now included among the proposed G.A.P.C.s or for the deletion of designated sites, should conditions change is as follows: 1) staff, governmental or public proposal to the Nassau-Suffolk Regional Planning Board; 2) staff study and evaluation, utilizing previously described criteria; 3) staff recommendation to the Regional Planning Board; 4) Regional Planning Board acceptance and public hearing; 5) modification, if necessary; and submission to New York State.

**COASTAL ZONE MANAGEMENT PROGRAM
KEY MAP OF GEOGRAPHIC AREAS
OF PARTICULAR CONCERN**

Prepared by

**Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787**

**Dr. Lee E. Koppelman
Project Director**

15 June 1977

Task 2.1

Contract Number D93967

The preparation of this report was financially aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This report was prepared for the New York State Department of State.

COASTAL ZONE MANAGEMENT PROGRAM
LAND CAPABILITY CLASSIFICATION SYSTEM

Prepared by

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Appendix

Bibliography

I. Description of the Land Capability Classification System

Land Capability is a land classification scheme which reflects the ability of the environmental resource to support various land uses and the related activities. The system involves the assignment of land areas to capability units on the basis of the land's physical and locational characteristics.

The system physically divides the land into the following categories:

Land Capability Unit I -

the environmental resource can support almost any land use without adverse environmental effects if controls are provided to meet groundwater and freshwater quality standards and the aquifer yield is sufficient to meet the demand.

This unit is categorized by an absence of fragile resources and by low susceptibility to impact from most types of development. The required performance standards are at a minimum. Existing environmental laws suffice. The primary concern is the prevention of further degradation of groundwater and surface waters.

Where intensive development occurs the performance standards relate to future changes, renovations, redevelopment of the areas to reduce any adverse impact on the environment while accommodating future growth. It is preferable for these areas to accept growth so that sites in Land Capability Units III and IV can remain low intensity development and/or no development areas.

Land Capability Unit II -

the environmental resource can support most land use activities provided steps are taken to mitigate adverse environmental effects.

This unit is characterized by somewhat more vulnerable resources, including areas of natural vegetation and associated wildlife habitats. The areas included are not exceptional in terms of productivity, diversity or uniqueness.

The constraints to development increase in this unit.

Groundwater may be within 16' at least sometime during the year, and the land may have slopes of 8% where erosion potential is high.

This unit includes flood prone land subject to 100 year floods not otherwise classified as L.C.U. III and IV. This land has water storage capacity and flood buffering capacity during times of heavy storms. Construction on this land is subject to hazards which can and are being minimized by performance standards and Federal Flood Control regulations.

L.C.U. II are areas recommended for development that require performance standards to minimize environmental impact. This unit includes any development as long as performance standards are met. The permit procedure process must require detailed drawings and specifications as to how each of the required performance standards are to be met.

The controls required for L.C.U. I are also required for this unit.

Performance controls and design criteria can be used to reduce the impacts upon natural areas, including erosion, sedimentation, loss of habitat, loss of change in primary productivity. See Land Capability Unit Chart.

Land Capability Unit III -

the environmental resource can support selected uses provided steps are taken to minimize density and to mitigate adverse environmental effects.

This unit has increasingly valuable resources including prime farmland, prime aquifer-recharge areas, prime wildlife areas and significant watershed areas and buffer zones for L.C.U. IV areas. In ecological terms this unit includes areas of high species diversity, other areas of species significance (rare or endangered species) and areas of high productivity.

The area can tolerate limited development as long as development is accompanied with performance controls that minimize impact. The performance controls included in L.C.U. I and II apply also to this unit.

Land Capability Unit IV -

any development would result in moderate to extreme degradation of the resource.

This unit includes the resources that cannot tolerate development except in an extremely limited sense. This area is recommended for preservation. The resource units include the dune system on the barrier islands, small islands, tidal marsh, freshwater marsh, and the area immediately next to the water's edge (either fresh or marine waters), the bluff face, and areas where the depth to seasonal highwater is less than 3 feet. This land must be carefully managed and protected to protect the resource. The performance standards required for this resource include all of the standards for Land Capability Units I thru III where they are applicable.

L.C.U. IV would be developed only under conditions where overriding economic or social values are to be served.

As the importance or uniqueness of the resource increases the land capability unit to which it is assigned becomes more restrictive in terms of the kind of development that can occur (i.e., permissible uses) and the performance standards imposed in order to minimize undesirable impact. Each capability unit includes resource types, a concept of probable impacts, and a range of permissible land uses and performance standards where appropriate. The background material used to determine the Land Capability Unit for any particular site can be identified by looking at the Natural Resource and Developmental Constraints Maps upon which Land Capability is based. See Chart I for the resource units (i.e., natural resources and developmental constraints associated with each capability unit). The maps and the accompanying charts - Environmental Impacts of Land Uses and Activities - Environmental Impacts of Construction Activities - Environmental Features Chart - the Direct and Significant Impact Charts for Operational and Constructional Phases of Development can be consulted for writing an EIS. Site visits and tests are also required. The Land Capability System can be used as a guide for site development and for the site development approval process.

The Land Capability is based upon the following assumptions: 1) Land management should be based upon the management of the entire ecosystem. The coastal zone was divided into geographic areas characterized by the presence of major ecosystems as described in the natural resources. The buffer zones described in the Land Capability Units are vital for the protection of the resources. 2) Land management for the protection of fresh and marine systems must include management of the entire watershed

area. Therefore, one of the primary important inputs into Land Capability are the characteristics of the watershed. It is especially important to control the quality and quantity (rate) of stormwater runoff into the receiving water bodies.

Any development within a coastal watershed area has a potential impact upon fresh and tidal wetlands, terrestrial vegetation and associated habitats, groundwater and upon aquatic and marine species. The amount of impact depends upon the type and extent of development and the vulnerability of the environmental unit.

The performance standards that were developed for the various Land Capability units concentrated upon the impacts upon the immediate systems (such as vegetation, soils, wildlife habitats) and upon the receiving waters and their inhabitants. A primary goal of the performance standards is to control and dispose of stormwater runoff in order to replicate insofar as possible the natural recharge of the area in terms of quality and runoff rate.

The concept of ecosystems recognizes an organization and dependency between plants and animals in response to their physical environment. Optimum efficiency is required of the living portion of the ecosystem in capturing and storing nutrients and energy within the system. If this environment is disturbed by man's activities such as removing or changing soils, vegetation, solar insulation, water quality parameters or quantity, the system loses productivity and diversity.

The coastal zone has a number of major systems which may be intertwined in terms of areal extent. The natural resources section will

attempt to describe the major coastal ecosystems in terms of the dominant plants and animals that make up the biotic communities, the related physical properties of the system, and the observed unique or particular sensitivity of the system to human activities. The impacts are described in the Direct and Significant Impact Chart. The impacts are primarily changes affecting the physical and biological interactions of the system.

Land Capability recognizes the varying ability of the resource units to tolerate development that arises from differences in depth to groundwater, the existence of bluffs, flood prone areas, the barrier islands, areas subject to coastal erosion and biological-physical systems such as estuaries, freshwater ponds and streams, tidal streams, wildlife habitats, plants communities and other ecological associations in the coastal zone. Chart II summarizes the relationship between Land Capability and significant resource features.

The impact of development is related to the physical and biological resource types and with the location of the development within the watershed or system. The impacts may increase as development occurs closer to the surface water or groundwater systems. The impacts upon groundwater may also increase as the soils become more permeable. Impacts are associated with the physical-biological characteristics of the resource units and with the locational characteristics.

Another major assumption of the Land Capability System is that performance standards are required to mitigate significant environmental impacts for Land Capability. Performance standards are cumulative in nature; that is, standards established for Land Capability Unit I also apply to Units II, III and IV. Those established for Unit II apply to

Units III and IV; and those established for Unit III apply to Unit IV.

Another major assumption of the Land Capability System is that performance standards are required to mitigate significant environmental impacts for Land Capability. Performance standards are cumulative in nature; that is, standards established for Land Capability Unit I also apply to Units II, III and IV. Those established for Unit II apply to Units III and IV; and those established for Unit III apply to Unit IV.

See below for Chart I and Chart II. Chart I summarizes the relationships between the capability units, the related environmental resources, developmental constraints and the recommended controls or performance standards required for each resource.

LAND CAPABILITY UNIT I (L.C.U. I)

CHART 1
LAND USE CAPABILITY REFERENCE CHART

RESOURCE CHARACTERISTICS		EXISTING DEVELOPMENT PATTERN AND/OR PERMISSIBLE USE	DEVELOPMENTAL CONSTRAINTS	CONTROLS OR PERFORMANCE STANDARDS REQUIRED
Physical	Biological	<p>* Primarily where development is set where few scattered parcels remain including full range of development types</p> <p>1. Urban Areas: Commercial, industrial, utilities, institutional, H-D Above uses mixed with 5-10 residential</p> <p>2. Suburban Areas: 5-10 D.U./Acre, 2-4 d.u./acre, residential, scattered commercial</p> <p>3. Suburban - low density $\leq 0-1$ U/A.</p>	<p>Areas where hazards to development are minimal.</p> <p>If undeveloped: * Areas are above 100 year flood plain, or beyond 200' of eroding bluffs, etc.</p> <p>If developed: hazards to development may exist</p>	<p>1. Improvement in the quality of groundwater recharge for new construction sites</p> <p>2. Direct recharge - as close to source as possible except for roads, highways, CBDs and shopping centers</p> <p>3. Direct filtered recharge for new parking lots, commercial centers.</p> <p>4. Creation of sediment basins to filter stormwater runoff from highways, major roads</p> <p>5. No direct discharge into natural fresh or salt marsh systems or into surface waters for new construction of roads or buildings</p> <p>6. No $\frac{1}{2}$ increase in stormwater runoff for new development > 5 acres.</p> <p>7. Septic tank - min. of 1' above depth to seasonal water table.</p>
	Vegetation			
1. Soils - Lack of soil constraints	1. Lack of natural* vegetation			
Soils low in productivity	Primary successional species			
No prime farm soils	Wildlife			
2. Hazards to development	Lack of wildlife habitat			
Lack of hazards not within 100 year flood plain				
Geomorphic Features				
1. Varying degrees of natural land form remains				
* Slopes: 0-8% if undeveloped.				
Groundwater				
Developed Areas: May include a high potential impact to groundwater and nearby surface waters.				
Undeveloped areas: Depth to groundwater > 16'. Areas of least groundwater recharge if undeveloped.				

* Primary Determining Factors

CHART 1 LAND CAPABILITY REFERENCE CHART

LAND CAPABILITY UNIT II (L.C.U. II)

RESOURCE CHARACTERISTICS		EXISTING DEVELOPMENT PATTERN AND/OR PERMISSIBLE USE	DEVELOPMENTAL CONSTRAINTS	CONTROLS OR PERFORMANCE STANDARDS REQUIRED
PHYSICAL	BIOLOGICAL	Areas partially developed	*Land within hazard zone (100 Year Flood Plain)	Items 1-7 L.C.U. I
<u>Soils:</u> High, Medium & Low Permeability Cut and Fill Land Does not include prime farm soils.	<u>Vegetation:</u> Predominate dry oak, oak- pine, pine-oak and succe- sional forests, old fields and grasslands (not unique or prime) and maritime flora. All areas which have natural vegetation.	Areas not developed	Land where clays and silts may increase building costs	8. % of natural vegetation to be removed.
* Depth to GW <16'	<u>Wildlife Habitat</u> Presence of indigenous and migratory species not unique or prime.	Development pattern is pre- dominately suburban <2-4u/a or rural <0-1 u/a.	Land subject to high winds	9. % of site coverage
<u>GEOMORPHIC FEATURES</u>		<u>Recreation Categories</u> Applicable to L.C.U. II	Potential problems with septic tanks due to high water table levels in pre- viously developed areas.	10. Grading standards
Large % of natural land form remains including land near bluffs (X') undulating hills		Active Recreation Community Buffer Zones Environmental Buffer Zones Passive Recreation Hiking, picnicking, boat dock, historic, cultural.	Slopes >15% may constrain development	11. Erosion control
All slopes greater than 8%		Active Recreation - when meets performance stand- ards.	Forest areas subject to frequent fires.	12. Stormwater runoff control - control of sedimentation

- *Important watershed areas
or buffer zone
Including all slopes of 8%
- *Important aquifer recharge
areas
Soils of high permeability

Developed areas on Long
Beach

* Primary Determining Factors

LAND CAPABILITY UNIT III(L.C.U. III) - CONSERVATION

LAND USE CAPABILITY REFERENCE CHART

CHART 1

RESOURCE CHARACTERISTICS		EXISTING DEVELOPMENT PATTERN AND/OR PERMISSIBLE USE	DEVELOPMENTAL CONSTRAINTS	CONTROLS OR PERFORMANCE STANDARDS REQUIRED
PHYSICAL	BIOLOGICAL			
	Prime Wildlife Habitats			
Soils: Soils of high permeability	1. Prime nesting areas	Sparsely developed or areas with rural density upland areas	Same as L.C.U. II	Items 1-13 listed under L.C.U. I and II
High productivity for crops or natural communities	2. Prime feeding areas	Suburban density (or less) for low land areas		14. The intrinsic characteristics of the resource must remain
* Prime farms soils	3. Diverse habitats	Any developed or undeveloped area within 100' of limnetic or estuarine system or within 100' of prime resource		No more than 10% coverage of natural vegetation may be removed. Trees may be thinned to provide optimal growth conditions for clearstory and understory vegetation
Slopes: 215% within 300' waters edge	4. Highly productive habitats			15. No wetland vegetation to be disturbed by removal of vegetation or by sedimentation or by change in stormwaters reaching wetlands.
35% anywhere	5. spawning areas			16. No more than 10% of land may be developed.
Developed Barrier Island Area	All land within 300' of above resources and fresh and tidal wetlands.			17. No development on slopes >35%
Land within 100' of waters edge	Areas of Natural Vegetation			
Depth to seasonal High Water Table less than 3 ft.	Areas of high productivity			
	Areas of high diversity			
	Buffer zones for Freshwater Wetlands, Tidal Wetlands and for other natural areas of prime importance			
High potential impact to groundwater				
Prime aquifer recharge areas.				
Significant buffer areas to limnetic and estuarine systems				
Significant watershed areas				
All major natural drainage channels. (Drainage channels of greater than 1000' in length				

*Prime Farm Soils include Bridgehampton silt loam 0-8% slopes Haven Loam 0-6% slopes, Montauk fine sandy loam 0-8%, Montauk silt loam 0-8%, Montauk loamy sand 0-8%, Riverhead sandy loam 0-8%, Scio silt loam 0-6%.

Tax incentives: encouragement should be given for maintaining land in natural state.

LAND CAPABILITY UNIT IV (L.C.U. IV) - PRESERVATION

CHART 1
LAND CAPABILITY REFERENCE CHART

RESOURCE CHARACTERISTICS		EXISTING DEVELOPMENT PATTERN AND/OR PERMISSIBLE USE	DEVELOPMENTAL CONSTRAINTS	CONTROLS OR PERFORMANCE STANDARDS REQUIRED
PHYSICAL	BIOLOGICAL	Land and resources are generally intact. Sparse development may exist in upland areas	Area is recommended for no development.	Specific controls required for each development such as: road or fire roads, pedestrian trails, horse trail, bike path, rangers lookout, entrance gate house, etc.
		Land areas may also include developed land adjacent to land within L.C.U. IV Category.	Area would include the full range of developmental constraints	
Slopes:	Soils: High, Medium and Low permeability		Recreation Categories Applicable to L.C.U. IV	To be reviewed for potential environmental impact. Items 1-17 apply where applicable.
	With high potential for prime terrestrial habitat		passive recreation with controlled activities and with controlled entrance - included educational, research, fishing, hunting	
Slopes:	All slopes greater than 25% within 300' of surface waters.	Areas of Prime Ecological Importance		
	*Land within X' of Bluffs (X = 50', 100', 200') depending upon rate of erosion - See erosion sub-plan.	Includes low, medium and high marsh, woodland directly above tidal marshes. Areas within 100' of all wet-lands, fresh and marine surface waters, prime, highly diverse scarce or unique vegetation		
	*All land below mean high water level			
	*All land within 50' of surface water body			
	All undeveloped areas on the barrier islands			

* Primary Determining Factors

LAND RECLAMATION

(L.C.U. R.I.)

CHART 1
LAND CAPABILITY REFERENCE CHART

RESOURCE CHARACTERISTICS		EXISTING DEVELOPMENT PATTERN AND/OR PERMISSIBLE USE	DEVELOPMENTAL CONSTRAINTS	CONTROLS OR PERFORMANCE STANDARDS REQUIRED
PHYSICAL	BIOLOGICAL		Existing	
Soils: May included any soil type	Wildlife habitats and natural vegetation communities may partially remain, but usually are altered or destroyed.	Land may be sparsely developed, is usually being used for industrial or agricultural uses	developmental constraints for similar elevation	Performance standards for same elevation levels may apply
Geomorphic Description:		Lack of residential and commercial development.	Land may be cut & fills slopes may be 1:1 or 1 1/2: 1	Performance standards for L.C.U. I - IV may apply
Any land form or type		Potential L.C.U. R.I. candidates: former duck farm, sand pit, parking lot, equipment storage area, derelict buildings, former utility or industrial site, former institutional, commercial, tourist facilities	Soils may be unstable, high in organic content, clays, silts. Soils may be dredge disposal.	Performance standards would be usually for L.C.U. I, II and III.
Slopes: Any type			Developmental constraints for adjacent lands may apply	
Depth to Groundwater: any depth				
Aquifer Recharge Area: Prime Other				
Has potential scenic and historical characteristics				

CHART II

SUMMARY OF THE RELATIONSHIPS OF LAND CAPABILITY AND SIGNIFICANT RESOURCE FEATURES

<u>Resource Characteristic</u>	<u>Land Capability Relationship</u>
Value of land as aquifer recharge area	Value increases as L.C.U. increases from I to III
Value of land for agriculture production	Highest at L.C.U. III
Value of land for primary productivity	Highest at L.C.U. IV
Value of resource-specie diversity	Highest at L.C.U.'s III & IV
Increase of energy flow	Highest at III & IV
Sensitivity of resources to developmen- tal impacts	Increases as L.C.U.'s increase from I to IV
Value of land as watershed - role in surface water protection	Increases as L.C.U.'s increase from I to III or IV
Nearness to sensitive areas	Increases at L.C.U.'s increase from I to IV
Development constraints	Increase from L.C.U. I to II
Hazards	Increase from L.C.U. I to IV
Slopes	Increase from I to II III and IV relate to slopes in terms of watershed function
Bluffs	Hazard present in III and IV
Depth to groundwater	Decreases from I to II

L.C.U. = Land Capability Unit

II. Need for Land Capability System

A system of this type was recognized as important because of the need to minimize the further loss of the important resources of the area such as farmland, areas of scientific and educational importance, highly productive wetlands, the estuaries which are of great commercial importance of Nassau-Suffolk for their commercial and recreational value. This system has resulted in a determination of where permissible uses and the associated activities can occur without significant degradation of coastal resources and interference with process.

The system can also identify the impacts that may be expected if the various resources are developed for an assortment of land uses. Thus the tradeoffs will be known.

Appendix Chart A-I indicates the relationship of the resources and the impacts upon the resources by general development. Appendix Chart A-II describes the relationship of activities and direct and significant impacts.

The need for a land capability system was recognized by the observation of impacts that have occurred as a result of development and that could be greatly minimized by using a combination of design controls and performance standards. A list of the impacts follows:

- A. Observed impacts of development upon the resource units
 - 1. Loss or change in unique features
 - 2. Total loss of resource
 - 3. Watershed alteration
 - 4. Loss or change in biota, productivity and diversity
 - 5. Loss of groundwater quantity and quality

6. Loss of surface waters quality and quantity

7. Loss of prime agricultural land

B. Observed impacts of environmental conditions upon development

1. Slope failure

2. Shoreline erosion

3. Natural terrestrial sedimentation and erosion

4. Long-or short-term settlement

5. Surface and structural damage from shrink swell

6. Surface and structural damage from frost heave

7. High water table floodings

8. Tidal flooding - property losses, landform damage.

III. Use of the Land Capability Classification System

The Land Capability Classification system provides a tool for the use of both public and private decisionmakers who wish to utilize land and water resources in a manner consonant with preservation of environmental quality. It was developed as a guide to locational decisions relating to land uses and activities and to the establishment of performance standards that might serve to mitigate the impacts generated as a result of those decisions. Each Land Capability Unit identifies a range of permissible uses than can occur with minimal environmental impact. These recommended uses relate to the characteristics of the natural environment previously discussed.

The Land Capability Classification Map indicates the Capability Unit of a particular parcel or geographic area while the accompanying Land Capability Reference Chart (Chart 1) lists those uses and activities that are acceptable per se and those that are acceptable subject to the utilization of management practices designed to eliminate or reduce adverse impacts.

IV. Development of the Land Capability System

The land capability system was developed by asking and developing information and conclusions to the following questions:

What do we have in terms of resources?

What are the resources' primary and essential characteristics?

What role do the resources play in a larger system? How do the systems work?

What resources have the greatest value to society?

What are the impacts upon the resources?

How are the resources changing due to development? (i.e., man's activities)

For the resources of lower value, how can developmental impacts be minimized?

What are the predicted future changes in the resources?

What resources are related in terms of response to development? What resources are directly impacted? What resources are diminished by secondary impacts?

How can the resources be classified in terms of the tolerance of development? (See also Permissible Uses discussion.)

Based on the information generated in response to the above questions, the staff identified four major resource classes or Capability Units.

Once these Capability Units were determined and the controlling resources for each unit identified, information from the Natural Resources and Developmental Constraints Maps was used to produce Land Capability Classification Maps for the coastal zone. The system was then presented to various groups for suggestions for refinement.

V. Relationship of Environmental Impacts and Land Capability

The Land Capability System was developed for the purpose of guiding locational decisions relating to land uses and activities and the establishment of accompanying performance standards where necessary to minimize environmental impact. The classification of areas in capability units was based upon the ability of the environment to "carry" the recommended uses and activities.

A significant portion of the land capability work was devoted to an evaluation of the environmental effects of projected growth and development upon the resource unit. (These effects were summarized in Charts #A-1, A-II and AIII.)

The resource units were divided into categories based upon an analysis of the ability of the resource to tolerate expected impacts by the type of resource and by type of impact. Expected impacts were divided into long-term and short-term impacts.

Since land capability units must be mapped, it was necessary to determine the condition of the resource by location:

1. resources are depleted or gone;
2. resources have a high potential of being successfully reclaimed;
3. resources are reasonably intact.

VI. Land Capability and Permissible Uses

Chart 1, p. 8 - - provides a description of the major environmental aspects of the four capability classes and indicates the kinds of development considered acceptable for each. Existing development, particularly in urban areas, is generally regarded as a "given". Inasmuch as the application of limitations on development in essentially built-up areas would be not only unfair, but of little environmental value, most of the intensively developed portions of the coastal zone have been assigned to Land Capability Unit I, locational and resource considerations notwithstanding. As indicated in the Chart, Land Capability Unit I, which includes the areas least likely to suffer damage from or provide hazards to man's activities, has the greatest range of permissible uses. All forms of residential, commercial, industrial, institutional and other uses that meet state and local health and land use regulations are considered acceptable. Land Capability Unit II, which is somewhat more likely to suffer damage from or present hazards to development, has a narrower range of uses that are permissible per se. Residential densities are predominantly suburban (<2-4 housing units per acre) or rural (<0-1 housing unit per acre). Non-residential uses, except for recreation or essential services, tend to be severely limited because of the need to meet performance standards. Land Capability Unit III, which includes highly permeable and productive soils, as well as steep slopes and fragile land forms, is even more limited in the range of permissible uses, allowing only agriculture and low density residential uses. Land Capability Unit IV, comprising the areas most likely to sustain degradation or even irreversible damage from man's activities, further limits the permissible uses, allowing only extremely low density scattered residential uses (for the most part already in place) and passive recreational or educational uses associated with preserves or other controlled or limited access areas.

The table below lists the Land Capability Units and related general categories of permissible uses.

LAND CAPABILITY AND PERMISSIBLE LAND USE

The following land uses are recommended for the Land Capability Units:

<u>Land Capability Unit</u>	<u>Permissible Land Use</u>
I	All land uses
II	All land uses except intensive urban development
III	Low density residential Farmland Park land Open space
IV	Prime Ecological areas requiring management

The relationships between Land Capability Units, resource units and recommended land uses and activities are described in Chart #1.

VII. Quantitative Characteristics of Environmental Resources Mapping

Much is yet to be done on the quantification of physical characteristics relevant to site planning. The developmental constraints maps provide general information for soil permeability, the existence of slopes greater than 15%, a general indication of the range of depth to seasonal high water, etc. The 100 year flood plain maps show whether a property is within the estimated boundary of the 100 year flood plain. This information is based upon readings at certain points. The flood levels between the points are inferred. The coastal erosion subplan and a previous study, The Erosion of the North Shore of Long Island, by Davies, Axelrod and O'Connor, provide information on the erosional rate of the Nassau-Suffolk shorelines. Recommended setbacks are based upon the erosional rate. The erosional rate, which varies yearly, is taken from readings at certain locations. The rate between points is inferred.

The developmental constraints maps vary in accuracy depending upon the resource being mapped. Important unknowns that may have significance for individual site design include the possible presence of clay lenses, small localized mounds or depressions in the groundwater, and the precise bearing capacity of the soil at the required depth. This information requires site testing.

Some quantitative data appropriate for watershed planning and estuary management will be developed as part of the 208 project. Once this information is complete, it will be incorporated in the Land Capability (L.C.) System.

The areal extent of the boundaries of the natural resources were based upon 1976 aerials. The accuracy is estimated at 95% for areas larger than 1 acre. Areas of less than one acre which are different

from contiguous areas are not mapped. This information must be updated and revised as all are subject to change.

The areal extent of the Land Capability Units are approximations only. The setback boundaries for Units III and IV are not to scale but indicate the existence of the units. The scale of the maps is too large to accurately delineate such small distances. The areal extent of the Land Capability Units for any location is probably 85 to 90% accurate. To determine the appropriate capability classification for border areas or atypical parcels it will also be necessary to compare the site characteristics with the description of the capability units.

The developmental constraints maps indicate depth to groundwater less than 3' based upon soils information. This represents an average high water condition; the boundaries of these areas are varying but the area enclosed is reasonably accurate due to the large scale of the maps.

VIII. Introduction - Natural Resources

As part of the Coastal Zone Management Plan, a Natural Resource Inventory was conducted. From this inventory Land Capability Units were derived as previously described.

In this, the Natural Resource Inventory section of this study, the mapping technique will be discussed.

Mapping

The mapping for the Natural Resource Inventory for Nassau and Suffolk contains forty-two boards. Each board comprises a planimetric base map and a natural resource inventory overlay. The base map is on a scale of 1"-2000'; it was derived from the U.S.G.S. Topographic 7 1/2 min. quadrangle series and the N.Y. State Dept. of Transportation maps (scale 1:800; dated 1974).

The inventory information was divided into the following categories: Primary and Secondary Coastal Zone Boundaries, Freshwater Wetland, Tidal Marsh, Forest, Maritime Flora, Dunes, Beaches, Old Fields, Farmland, Bluff and Developed Area. Except for Freshwater Wetlands, Tidal Marsh, Maritime Flora and Coastal Zone Boundaries, the sole mapping sources for areas other than the South Fork were April 29, 1976 aerial photos (scale 1:1320) flown by the Aerographics Corp. of Bohemia, N.Y. and staff field checks. The South Fork map sources also included vegetation information from the Group for Americas South Fork map series.

For the wetland areas additional sources were used. These sources are as follows:

Freshwater Wetlands: N.Y. State Freshwater Wetlands, Dec. - Barbara Haines,
John Renkavinsky
Bureau of Water Pollution Control
Nassau County Health Dept.
Jeff Sama

Town of Hempstead Dept. of Conservation & Waterways
John Zarudsky

Tidal Marsh: N.Y. State Tidal Wetlands
DEC & U.S.G.S. Topo Maps
Town of Hempstead Dept. of Conservation & Waterways
John D. Zardusky and Harold F. Udell

Coastal Zone Boundaries:

All land within the primary and secondary coastal zone was mapped. For a complete description, see the Coastal Zone Boundary memo.

Whenever there was an overlap between two categories the predominant characteristic was represented. For example, bluff took precedence over vegetation.

In transitional areas, such as formerly connected tidal marshes and drained fresh marshes, the area is represented as it appears on the aerial photo unless specific site information existed. If an area has both old field and fresh marsh vegetation, the area is called a fresh marsh.

Freshwater streams, tidal streams, ponds, lakes, estuaries, bays, all surface waters appear on the base map. Tidal flats, mud flats, reefs appear in incomplete form on the U.S.G.S. quadrangles. Coastal shoals have been mapped at the 6' and 12' contour levels on the preliminary Natural Resource Maps. The location of shellfish and other coastal wildlife habitats, feeding and nesting areas are also indicated on these maps. Water bodies and natural resource types of less than one acre do not appear on maps.

IX. Developmental Constraints

Developmental constraints are those physical and locational characteristics of the land and water resource, which, alone or in combination with on-going coastal processes, present hazards to or limit the economic feasibility and environmental acceptability of development.

Soil permeability, range in depth to maximum seasonal elevation of groundwater, slope, location in respect to the 100 year flood plain, and the shoreline erosional rate are all considered in the assignment of each area to one of the Land Capability Units.

Although quantitative data relating to environmental constraints is less complete in respect to detail and geographic coverage than might be desired, it is nonetheless sufficient to permit the development of generalized maps. It may be assumed that the developmental constraints maps, based on S.C.S., U.S.G.S., C.O.E., and NYSDEC data as interpreted by the Regional Planning Board staff, are correct for any given area approximately 90% of the time. However, anyone consulting the maps should be aware that the absence of recorded evidence of developmental constraints cannot be regarded as conclusive. There are several important site specific conditions such as the existence of clay lenses, specific bearing capacity, etc. and important site characteristics must be determined by site testing.

Mapping

The maps for the Developmental Constraints section were prepared in the same manner as the maps for the Natural Resource inventory, that is, 42 boards each with a planametric base map and detailed overlay, on a scale of 1"=2,000', derived from the U.S.G.S. 7 ½ min. topographic quadrangles, and the 1974 N.Y.S. Dept. of Transportation Maps.

The overlay map has been divided into 14 classifications. Nine of these classifications refer to soil permeability and were derived from the Soil Survey of Suffolk Co., N.Y., prepared by the United States Department of Agriculture. The dunes, bluffs and beaches were first observed on the 1976 aerial photographs. This information was supplemented by U.S.G.S. topographic maps, the soils survey and staff field checks.

In addition to the sources already mentioned the staff used published and unpublished U.S.G.S. water quality data and hydrological data for their depth to groundwater calculations.

A discussion of the developmental constraints of the major surficial geologic units, current geologic coastal processes and significant soil characteristics will follow. Most of this information is taken from the 1975 Soil Survey for Suffolk County published by the Soil Conservation Service. Another general source were various soil engineering books, particularly Soil Mechanics and Engineering by Scott and Schoustra. The following surficial geologic units are found in the study area: glacial moraine, glacial outwash lacustrine sediment, dune land, and tidal marsh.

The glacial moraines, the Ronkonkoma and the Harbor Hill, are major geomorphic features of Long Island. The two east-west trending ridges provide topographic relief to outwash plains formed by alluvial processes during the retreat and advances of the two glaciers.

The glacial moraine as a land form is characterized as undulating and hilly with depressions. The north shore Harbor Hill moraine and the eastern section of the Ronkonkoma moraine are still being eroded by aeolian and wave processes. The flow of stormwater as sheet runoff and in intermittent streams also contributes to the modification of the landform.

The glacial moraine has a larger percentage of fines mixed in the parent material than does the outwash plain.

These smaller soil particles may decrease permeability. The boulders and cobblestones found in the till make excavation and site development more difficult.

The topography of the moraine may require extensive cut and fills. Since the topography consists of hilltops, sideslopes and lowland, the soils are constantly varying. The side slopes tend to be sandy while the upland flatter areas and particularly the lowlands contain more fines. The

depressions contain organic matter and silts which are not suitable as a base for paving or for foundations.

The depth to seasonal highwater may be near the surface in the depressions, generally due to a clay lense or to the groundwater level.

Glacial outwash consists of stratified sands and gravels. The unit is gently sloping, usually 3% or less. The sandy and gravelly outwash materials are loose in consistency and have high permeability but require some addition of fine grained soils as a binder for a road base. The outwash plains are dissected by numerous glacial meltwater channels gentle in profile but with slightly steeper slopes along the channel edges. Erosion is not as great a problem in the outwash plain, but cut soils tend to erode non-uniformly. The internal drainage, particularly near the coastal edge, may be poor due to the occurrence of impermeable layers.

Although the soils may be found to be high to average in permeability, internal drainage may be poor along the major rivers due to the high water table.

According to the Suffolk County Soil survey, the silty soils such as Bridgehampton and Plymouth with a silty substratum retain water near the surface during precipitation. If the area is developed, special attention should be given to the recharge areas.

The Carver and Plymouth soils cannot be used for top soil.

Where they occur natural vegetation should be used for landscaping. The Haven and Bridgehampton soils are good for topsoil and should be conserved.

The development constraints of the lacustrine deposits include a high water table and a large percentage of silts and clays eroded from uplands, which result in low foundation bearing strength. The soils

may be extremely plastic with a high shrink-swell potential.

Such soils are usually also subject to frost heave. This condition is not dominant for the soil layer but is significant when cuts are made into the parent materials. Areas with plastic soils are generally classified as L.C.U. III and IV.

Muck soils are indicated on the Natural Resource maps as wetlands, are classified as L. C. IV and are shown on the development constraints maps as soils with high water table. These soils are also not suitable for development due to high compressibility and low foundation strength. If roads are developed on these soils, there is danger that the contiguous areas and the groundwater will become polluted with stormwater runoff. This material must be removed in advance of any type of construction.

Beaches, dune land and tidal marsh are units not recommended for development.

The beaches and marshes have highwater levels - and are subject to wave action. The dunes are subject to storm waves and constant shifting due to winds.

The marshes have a large percentage of organic material, which has low bearing capacity and high settlement potential. Those lands are classified as L.C.U. III and IV.

The bluffs are landforms with 35% or greater facial slopes formed by the processes of wind and wave erosion, subsurface flow and by human disturbance. This unit is susceptible to erosion, slumping and land slides. The soils of the bluffs vary from sandy soils to clays. The bluff face and a recommended setback area are classified as L.C.U. IV.

The bluffs found along the north shore, in areas of the Peconic Bay and in the Montauk area, are subject to erosion due to wave undercutting from storms, lunar tides, subsurface flow and wind erosion. The erosion of these areas contribute material to downstream beaches and shoals.

A high erosional rate can result in loss of land, damage to and loss of structures within a relatively short period of time. The recommended setbacks and Land Capability Units are based upon the erosional rate (see Erosion Subplan). Performance standards are also recommended to minimize the impact upon development.

The barrier islands consist of dunes--the foredune, primary dune, dune trough and secondary dunes. The more protected dune trough and secondary dunes are more stable. On the bay side of the barrier island, salt marsh and a series of marsh islands occur. The natural processes acting on this beach environment, the wave and wind erosion, long shore transport, and flooding, provide the greatest constraints to development in the study area. All of these units are placed in Land Capability Units III and IV.

The location of the inland boundary of the 100 year flood plain generally occurs somewhere between the 5 and 10 foot contours on the south shore and it varies greatly on the barrier island. In areas where the terminal moraine or headlands are found on the coastal edge, the flood plain occurs below approximately 15 feet; however, along the major streams and rivers the flood plain extends up the streams to higher elevations. The flood plain can be altered by filling in land causing other areas to receive the waters. All flood plain areas not already assigned to L.C.U. III and IV are within Land Capability Unit II.

Permeability is defined as the ability or capacity of a porous medium to transmit a fluid. The permeability of soils in the study area relates to the variation in the rate at which water moves through the major soil horizons, as a result of the porosity or interconnection of open spaces in the soil (i.e. high in medium sand and gravels, low with silts, clays and possibly fine sands).

To simplify the mapping of permeabilities, the staff divided them into categories based upon the following transmission rates: .63 - 2"/hr, 2" = 6.3"/hr, and 6.3" per hour. Permeability is a important consideration in environmental planning to minimize future environmental impact upon the groundwater and surface waters.

Areas of high permeability occur on the map where the expected permeability is greater than 6" per hour. The areas of high permeability occur on the Carver soils. The potential for aquifer recharge is high if the soils are not underlain with clay but the potential for aquifer contamination is also high. Other permeability classifications are shown on the Developmental Constraints maps legend. Areas of moderate permeability may be significant for future groundwater filtering systems. These areas present minimum constraints for development. Areas of low permeability could also be used for filtering water.

According to the 1975 Soil Survey, if a soil is developed on grade, the frost heave potential is minimum for soils in Suffolk County and it is assumed to be generally the same for Nassau. The problem occurs where the subgrade, when exposed by cuts, is not uniform and differential frost heave occurs. The soils most susceptible to this condition are the Bridgehampton, Haven and Montauk series.

Frost heave also occurs when available high water is drawn near the surface by capillary action. This is most likely to occur in the following soils: Atsion, Berryland Canadice, Raynham, Walington, Walpole, Woreham, and Whitman. The soils are partially or totally associated with marsh areas and contiguous lands and should not be developed. Areas with these soils are classified in Land Capability Units III and IV. The developmental constraints maps identify the areas where frost heave is most likely to occur. On-site testing recommended.

The depth to groundwater classification for mapping purposes were divided into two major categories: 3 feet or less and 3 to 16 feet. This groundwater average is based upon USGS information. Recent highest reported groundwater levels were recorded by locating the particular observation wells on the map. In the areas with depth to groundwater of less than 16 feet the potential for impact upon groundwater is high. Possible sources of pollution include septic tanks, cesspools, recharge areas, and the leaching of pollutants applied to the soil surface and surface vegetation. If a maximum size cesspool is 14', the 16' depth allows only 2' of soil between the bottom of the cesspool and the upper range of groundwater level. This depth may not be sufficient for the filtering of potential pollutants.

The maps are essentially probability maps. Identification of areas with 0-3' range is based upon soils and wetlands mapping; the 3' - 16' areas is based upon groundwater contours. Some areas that have depth to groundwater less than 16' during very high water tables may not be included. However, it is expected that the accuracy of the mapping is in the 80% range.

For mapping purposes the slopes were broken down into the following categories: 0-3%, 3-8%, 8-15%, 15-25%, 25%.

The slopes were considered individually and as a part of a watershed system for Land Capability classification. See L.C. Chart. The slopes are a constraint to development and development on slopes is a source of significant environmental impact. All slopes are covered by Land Capability Unit II performance standards. Slopes of prime watershed importance are covered by Land Capability Unit III performance standards.

Slope erodibility potential was not mapped for Nassau-Suffolk because the information required to accurately delineate areas is not available. However, the areas that are probably most susceptible to erosion from territorial forces are land surfaces in swales, disturbed soils, slopes of 8% or greater, soils where sheet runoff occurs, soils subject to high winds, and non-vegetated slopes.

In general, well-graded sands and gravels are less susceptible to erosion than soils mixed with clay or silts. Soils with high permeability not subject to runoff

or flowing water are less susceptible to erosion than soils with lower permeability.

Landforms subject to wave action along high energy beaches are most susceptible to erosion. Landforms that are located along embayments are less susceptible to erosion.

Areas most subject to sedimentation include areas below or downstream of areas of exposed or disturbed soils or where increased stormwater runoff stresses natural drainage systems.

The man-made units, which include dredge spoil, filled land and gravel pits vary widely in physical properties. Site examination is required. Bluffs, beaches and the barrier island are subject to dynamic and/or constant change and provide the most critical constraints to development.

X. Performance Standards

The guidelines and performance standards mentioned in the Land Capability Chart I are concepts which will be developed as part of the management phase of Coastal Zone Management. The performance standards are required to minimize further impact upon the resources and to reduce the hazards upon development.

The guidelines and performance standards hopefully can be used to streamline and clarify the permit review process for the developer and for governmental officials.

The performance standards to be developed will rely heavily upon information developed for the 208 project including work of the Soil Conservation Service.

Appendix

Contents

- A-I Summary of Environmental Constraints; Environmental Features Process Chart
- A-II Environmental Impacts of Construction Practices
- A-III Environment Impacts of Land Uses and Activities
- A-IV Land Use Capabilities of Critical Environmental Features

SUMMARY OF ENVIRONMENTAL CONSTRAINTS

Environmental Feature or Process Mapping Unit	Description and General Location	Environmental Role	Impact of Land Use on Environmental Feature	Impact of Environmental Feature or Process Upon Land Use	Value of Feature	Related Processes and Features
Steep Slopes Coastal Zone (Inland Feature)	Slopes over 10% are shown on lev. maps. Slopes over 25% (also designated) are generally in the areas of the terminal moraines (Rontomoma and Harbor Hill) and ground moraines of North Shore.	Many of the steep slopes have remained forested due to the high costs of construction in these areas. The forest cover provides watershed protection for fresh and marine waters.	Increased sedimentation, erosion, loss of top soil, vegetation, wildlife habitat; increased nutrients and turbidity; decreased water quality; landslides and soil slump; altered surface hydrology; loss of prime watershed, increased runoff, alteration of stream channels.	Increases development costs. Hazardous to some land uses.	Aesthetic - scenic	Bluff Soles Steep Slopes
Areas of Natural Vegetation Buffer Zones	Oak-pine forest Pine-oak forest Scrub forest Cedar swamps Maple swamps White oak forest Dune vegetation	Reduces stormwater runoff Reduces erosion Reduces sedimentation Reduces water turbidity Traps nutrients & metals Wildlife habitat Source of native vegetation Highest groundwater infiltration Lowest stormwater runoff Biochemical cycling	May reduce water storage See Steep Slopes Varies greatly with type of development and the site design If the vegetation zone is adjacent to wetland then the stresses to system are increased.	Modifies microclimate favorably Reduces air pollution Increases scenic interest Increases land value for recreation, residential, open space uses	See Impact of Environmental Feature or Process upon Land use. High real estate value Improves and stabilizes soil Reduces costly removal of sediments from infrastructure.	Bluffs Steep Slopes
Groundwater lakes and ponds	See surface water resources map	Direct connection with groundwater Food and water source for wildlife	Groundwater pollution Alteration of habitat May increase rate of natural succession and species diversity	Adjacent land has high water table.	Recreational Aesthetic-scenic	Watershed Soles Areas of natural vegetation

Source: "Integration of Regional Land Use Planning and Coastal Zone Science", A Guidebook for Planners, June 1976. Prepared by the Nassau-Suffolk Regional Planning Board for the Office of Policy Development and Research Department of Housing and Urban Development under Contract #H-2050R.

CONTINUED

Environmental Feature or Mapping Unit ^a	Description and General Location	Environmental Role	Impact of Land Use on Environmental Feature	Impact of Environmental Feature or Process Upon Land Use	Value of Feature	Related Processes and Features
Direct Watershed to Freshwater Bodies and Bays	Within 500 feet of coastal waters Within 500 feet of streams and rivers Within 1000 feet of groundwater lakes	When watershed area is covered with natural vegetation or some categories of managed vegetation, the watershed reduces impact on coastal waters by infiltration, dispersion. Tends to retain pollutants nutrients facilitating transformation and recycling Reduces temperature extremes in adjacent waters	Loss of watershed protective role Increase in erosion of soils Increase in transport of nutrients sediment to water Dynamic changes in groundwater and stream flow	Some potential flooding Destruction of property through increased surface runoff and erosion	Moderation of most terrestrial impacts on marine systems Moderation of microclimate Storm damage reduction if maintained in natural state Aesthetic Recreational	Natural vegetation Major swales Floodplain Zones Steep Slopes
Freshwater streams, rivers	See Inv. Maps	Wildlife habitat Source of food and water for wildlife	Alteration of stream flow: increased during storms, decreased during dry season Acceleration of sedimentation and runoff Produces changes in channel configuration, destruction of bank vegetation, increase of stream temperature and oxygen demand Increase of stress on species due to change of physical and biological parameters	High groundwater table may constrain development and waste disposal Potential flooding	Recreational Aesthetic	Watershed Swales Areas of Natural Vegetation
Floodplain 100 year-Regional Project Tide	Area on Inv. maps within and between the regional project tide boundary (bold striped line) and the coastal waters	Transitional area between uplands and coastal marine environment May contain wetlands, tidal flats, mud flats, natural vegetation communities, cedar bogs, maple swamps, wildlife habitats, beaches	Encroachment reduces flowage area and diverts waters, possibly increasing danger to life and property	Flood hazard	Aesthetic Recreational	See Environmental Role

CONTINUED

Environmental Feature or Process	Description and General Location	Environmental Role	Impact of Land Use on Environmental Feature	Impact of Environmental Feature or Process Upon Land Use	Value of Feature	Related Processes and Features
*Swales - 10% slope or greater	Swales are valleys or troughs that direct surface and subsurface runoff to waterbodies	Important surface hydrologic feature. Allows for groundwater seepage. Influence surface water quality.	With increased runoff from upland communities swales that handle natural runoff are overstressed with resultant impairment of watershed function. If the swale bottom is paved, the natural buffering by vegetation is lost. If a road is located in the swale bottom, the metals and other pollutants run directly into surface or subsurface water systems. Direct runoff may cause temperature, nutrients, and salinity stress to marine ecosystems.	Subject to flooding. Landslides, low depth to seasonal high water table	Channels and reduces impact of surface runoff. If surface runoff is maintained at near-natural rate, swales in areas of proper soils can reduce engineering costs and increase groundwater infiltration.	See Watershed
Beach Interstitial zone (Littoral zone)	See Inv. Maps for location. Zone subject to normal waves and tide action	See Biological Habitats. See Species - Habitat List. Sand provides a source of beach nourishment.	Alteration of beaches by the use of jetties and groins will cause loss of beach material "downstream" and increased beach erosion affecting adjacent beach properties.	Flooding Unstable soils Subject to high wind velocities	Recreational Visual Storm buffer	Floodplain zone
*Bluffs Headlands	See Inv. Maps. Generally located along the North Shore and South Fork region. Composed of sedimentary deposits with occasional clay lenses	Source of nourishment for downstream beaches	Accelerated erosion due to groundwater flow, surface runoff and pedestrian traffic. Accelerated sedimentation of coastal bays	Instability of landform results in hazards to development.	Aesthetic	Erosion Sedimentation Steep Slopes

CONTINUED

Environmental Feature or Process Mapping Unit	Description and General Location	Environmental Role	Impact of Land Use on Environmental Feature	Impact of Environmental Feature or Process Upon Land Use	Value of Feature	Related Processes and Features
Marine Bays - Estuaries	See Inv. Maps	Productive ecosystems Habitat for critical species	See Chapters 3 & 4	Flood damage	Recreation Shellfish industry Finfish industry Scenic-aesthetic	Watershed
Mud Flats (Tidal Flats)	Areas of deposition in quiet waters.	Source of nutrients for coastal waters. Supports worms and bivalves Food source for wildlife See description of coastal zone habitats.	Filling destroys feature	Expensive to develop and subject to flooding	Productive ecosystems Breaks tidal force Food Source	
Wetlands	Plant communities containing salt marsh, salt meadow and intertidal vegetation which are subject to daily or periodic tidal inundation Location-around marsh, creeks quiet embayments	Habitat for many species of fish at stages of life cycle Source of food and nutrients for wetlands and coastal waters, particularly the estuaries Contributes to water quality Biochemical cycling	Filling the wetlands results in the total loss of the system Estuarine stressors: salinity, temperature, turbidity, sedimentation are increased	Expensive to fill Expensive structural adaptations required May be underlain with fragile filled Protects upland area from flooding	Ecological: Wildlife habitat Food source for marine systems & wildlife Marine species habitat Productive ecosystem Sediment trap Scenic Scientific Moderates storm damage	Floodplain estuaries
Barrier Beach	Located off the South Shore of Long Island	Stabilizes the flood prone zone. Stabilizes the back bay system. Contributes to the formation and continuity of estuarine systems	Loss of stabilizing vegetation Erosion of the dunes Breaching of dunes Disturbance of bay salinity Increase of floodplain Increase of wind and tidal damage to dune communities	Areas subject to severe storm conditions and flooding	Aesthetic Flood reduction Recreation resource Protects estuarine resources	

The following impact ratings will vary according to the area and with varying opinions, but a range of impacts may be observed.

H = High Impact (Maximum condition) M = Moderate Impact (Average condition) L = Low Impact (Average Condition)

V = Varying Impact (Other processes involved) Resource capability is high where impacts are minimal or do not occur

ENVIRONMENTAL IMPACTS OF LAND USES AND ACTIVITIES

Mapped Environmental Feature	Type of Environmental Impact															
	Reduction of permeable surfaces	Destruction of vegetation	Increase of storm water runoff	Decrease of ground-water flow to streams	Lowering of water table	Increase of pollutants to groundwater	Change of physical and chemical parameters to water system: salinity, temperature, dissolved oxygen, etc.	Total oxygen demand	Increased sedimentation	Increased general erosion	Landfill-spoil areas	Alteration of topography-increased slopes	Vehicular circulation in natural areas	Sanitary landfill	Liquid waste	Application of pesticides
Creeks	N	N	N	N	N	N		N N V	N			N	L	N	V	V
Streams	N	N	N	N	N	N		N N V	N				L	N	V	V
Rivers	N	N	N	N	N	N		N N V	L			N	L	V	V	V
Ponds - perched	N	N	N		V			V N N	N		N	N	L	N	V	V
Ponds - groundwater	N	N	N		N	N		N N V	N		N	L	L	N	V	V
Lakes - groundwater																
Flood plains			N													
Bluffs	V	N	V							N		V	N			
Steep slopes over 15%	L	N	N							N			N			
Steep slopes over 25%	L	N	N							N			N			
Major Swales	N	N	N	V	V					N			N			N
Prime areas of natural vegetation	N	N	V	V	N				N	N		N	N			N
Natural vegetation	N	N	V	V	N				N	N		N	N			N
Wildlife habitats	N	N	V	N	N				N	N		N	N		V	V
Salt marsh	N	N	N	L	L			N N V V	N		N				V	V
Salt meadow	N	N	N	N	L				N	L	N		N		V	V
Maple swamp	N	N	N	N	L	N		L N V	N		N				V	V
Fresh water marsh	N	N	N	N	N	L		N N N	N		N		L		V	V
Wildlife feeding and nesting areas	N	N	N	N	N	N		V V V	N	L	N		N		V	V
Shellfish communities	N	N	N					N V N N	N		N				V	V
Tidal flats	L								N		L					
Mud flats									N		L					
Shoals																
Estuaries	N	N	N	N		L		N V V N	N		N	N			N	V
Inlets																
Spoil areas-revegetated	L	L											L			
Foredune	L	N														
Secondary dune	L	N														
Dune troughs	L	N														
Dunes not associated with barrier beach	L	N														

The following impact ratings will vary according to the area and with varying opinions, but a range of impacts may be observed.

N = High Impact (Maximum condition) M = Moderate Impact (Average condition) L = Low Impact (Average Condition)

V = Varying Impact (Other processes involved) Resource capability is high where impacts are minimal or do not occur.

Source: "Integration of Regional Land Use Planning and Coastal Zone Science". A Guidebook for Planners, June 1976. Prepared by the Nassau-Suffolk Regional Planning Board for the Office of Policy Development and Research Department of Housing and Urban Development under Contract #R-2050R.

LAND USE CAPABILITIES OF CRITICAL ENVIRONMENTAL FEATURES

Environmental Feature	Land Use Grouping												
	Residential 0-1 DU/A	Residential 2-4 DU/A	Residential 5-10 DU/A	Residential High Density	Commercial	Industrial	Utilities	Institutional	Open Space	Roadway	Agriculture	Water	Conservation Preservation
WETLANDS	Salt Marsh	IVH	VH	VH	VH	VH	IV-VH	IV-VH	IIIH	VH	VH	I	I
	Salt Meadow	IVH	VH	VH	VH	V	VH	VH	IV-VH	IIIH	V	VH	I
	Maple Swamp	III-IVH	VH	VH	VH	V	VH	VH	IV-VH	IIIH	V	V	I
	Fresh Water Marsh	III-IVH	VH	VH	VH	V	VH	VH	IV-VH	IIIH	V	III	I
	Wildlife Feeding & Nesting Areas								III	V		I	I
	Shellfish Com- munities											I	I
	Tidal Flats											I	I
MARINE WATERS	Mud Flats											I	I
	Shoals											I	I
	Estuaries											I	I
DUNES AND BARRIER BEACH	Inlets												
	Spoil Areas Revegetated (H)	II	III	III	III	III	III	III	III			II	II
	Foredune	VH	VH	VH	VH	VH	VH	VH	III	IIH		IV	I
	Secondary Dune (H)	IV/IIIH	IVH	VH	VH	VH	VH	III-VH	III	IIH		III	I
	Dune - troughs	III	IV	V	V	V	IV	III-V	III	IIH		III	I
FRESHWATER SYSTEMS	Dunes not associated with barrier beach	III-IVH	IV-VH	VH	VH	VH	VH	III-VH	III	IIH		IV-VH	I
	Creeks											I	
	Streams											I	
	Rivers											I	
	Ponds - Perched man made or natural											I	
PHYSIOGRAPHIC	Pond - Groundwater												I
	Lakes - Groundwater												I
	Flood Plains with setbacks	III	III	III	III	III	III	III	III	I	III	IIIH	I
	Bluffs with setbacks	III	III	III	III	III	III	III	III	III	IVH	III	I
	Steep Slopes over 10%	III	III	III	III	III	III	III	III	III	III	III	
VEGETATION	Steep Slopes over 25%	III	III	V	V	III	V	V	III	III	V	V	I
	Major Swales	III	III	III	III	III	III	III	III	III	III	III	I
	Prime Areas of Natural Vegetation	III	V	V	V	V	V	II-IV	III	I	V	V	I
	Natural Vegetation	III	III	III	III	III	III	III	III	III	III	III	I
	Wildlife Habitats	III	V	V	V	V	V	V	V	I	V	V	I

Land Capability Unit I = the critical feature can tolerate the indicated land use without adverse effects
 Land Capability Unit II = no impact on critical feature by following land uses
 Land Capability Unit III = impact resolved through meeting performance standards
 Land Capability Unit IV = feature would sustain major impact
 Land Capability Unit V = feature basically destroyed

H = Critical Feature or process is hazardous to land use high = 1, moderate = 2, low = 3, none = 4

Source: "Integration of Regional Land Use Planning and Coastal Zone Science",
 A Guidebook for Planners, June 1976. Prepared by the Nassau-Suffolk
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 Research Department of Housing and Urban Development under Contract
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**COASTAL ZONE MANAGEMENT PROGRAM
PERMISSIBLE USES AND PRIORITIES**

Prepared by

**Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787**

**Dr. Lee E. Koppelman
Project Director**

15 June 1977

Task 3.1

Contract Number D93967

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Permissible Uses and Priority of Uses

I. Land Capability and Permissible Uses

Nassau-Suffolk has made a determination of the environmental acceptability of various uses and activities based upon the concept of land capability. As indicated in the Land Capability Memo, analysis and mapping of natural resources and developmental constraints led to the establishment of a land classification system reflecting the ability of the resource to support a range of uses without suffering significant degradation or exposing man to unacceptable hazards. The Memo, which provides a detailed description of the characteristic of the four capability units or categories, lists the permissible uses for each unit, including those uses that are acceptable per se and those that are acceptable if the good site management practices or other techniques are employed to preclude or mitigate adverse environmental impacts.

Land Capability Unit I, which includes the areas least likely to suffer damage from or provide hazards to man's activities, has the greatest range of permissible uses. All forms of residential, commercial, industrial, institutional and other uses that meet state and local health and land use regulations are considered acceptable. Inasmuch as the application of limitations on development in essentially built-up areas would be not only unfair, but of little environmental value, most of the intensely developed portions of the coastal zone have been assigned to Land Capability Unit I, locational and resource considerations notwithstanding.

Land Capability Unit II, which is somewhat more likely to suffer damage from or present hazards to development, has a narrower range of uses that are permissible per se. Residential densities are predominantly

suburban (<2-4 housing units per acre) or rural (<0-1 housing unit per acre). Non-residential uses, except for recreation or essential services, tend to be severely limited because of the need to meet performance standards.

Land Capability Unit III, which includes highly permeable and productive soils, as well as steep slopes and fragile land forms, is even more limited in the range of permissible uses, allowing only agriculture and low density residential uses.

Land Capability Unit IV, comprising the areas most likely to sustain degradation or even irreversible damage from man's activities, further limits the permissible uses, allowing only extremely low density scattered residential uses--for the most part already in place--and passive recreational or educational uses associated with preserves or other controlled or limited access areas.

II. Priority of Uses

The determination of priorities for coastal locations requires an understanding of the site requirements of those uses and activities that are presently accommodated or will have to be accommodated within the coastal zone.

Analysis of land and water uses and activities in the coastal zone indicate that they can be classified as water dependent, water enhanced, and non-water related. Most, but not all of the existing uses or activities in Long Island's primary coastal zone are either water dependent or water enhanced.

There are four major groups of water dependent uses: 1) uses of the sea bottom, 2) uses of the living resource, 3) uses of the waters, and 4) uses of the land-water interface. A single use or activity may be found in one or more of the four groups.

Uses of the sea bottom include extractive uses, such as the removal of sand and gravel or petroleum products; use of the existing substate as habitat for shellfish, both naturally occurring and planted; and use as physical support for underwater transport and communication facilities such as pipelines, cables, transmission lines, and outfalls--both buried and exposed. The sea bottom is also used as an area for the deposition of wastes, particularly dredge spoil, sludge, and construction materials.

Uses of the living resource, which in some instances cannot really be distinguished from uses of the sea bottom, include the commercial harvesting of finfish and shellfish, aquaculture, and recreational shellfishing and finfishing.

Uses of the waters include the transport of persons and good, recreation, waste disposal, industrial processing, and desalination. The

availability of water borne transport is essential for the economic movement of bulk freight such as petroleum products; sand, gravel, and trap rock; cement; and, possibly, coal. It is important for the efficient movement of people and commodities via ferry. Coastal waters provide opportunities for such recreation activities as swimming, boating, water skiing, snorkeling, and skin diving. They also aid in the disposal of liquid or soluble wastes through the dispersion and dilution of sewage effluent, industrial chemicals and leachate from landfills and spoil disposal areas. They provide process water for industry, including cooling water for power generation. Finally, wherever desalination is feasible, coastal waters can serve as a source of potable water.

Uses of the land-water interface appear to be even more numerous than those constituting the three groups discussed above. They include, among others, the provision of sites for ports capable of handling bulk cargos; namely, oil terminals, and barge facilities for the receipt or transfer of sand, gravel, trap rock and cement; of furnishing docks and support facilities for the commercial fishing fleet; and of providing terminals and ancillary parking and staging areas for ferries. The shoreline furnishes waterfront sites for boatyards and storage facilities, marinas, and boat launching ramps, public swimming areas--generally beaches--and their ancillary facilities; fishing piers; bird watching and water fowl hunting areas; educational facilities offering instruction in nautical skills and in marine science; and for the conduct of ecological research and experimentation.

The land-water interface also accommodates such navigation aids as coast guard station, light houses, and jetties; and such erosion control devices as groins and inlet sand transfer devices. Occasionally, where

isolated locations are available, the terrestrial portion of the primary zone may accommodate hazardous uses--in the case of the Nassau-Suffolk Region, an animal quarantine station.

Water enhanced uses and activities are those uses that although not dependent upon access to the water benefit greatly from a coastal location. The attractions are both social, consisting of amenities not found at an inland site, and economic, consisting of increased profits or reduced costs of operation. There are three major groups of water enhanced land uses and activities: 1) public and private recreational uses of the shore and adjacent areas, 2) tourism, and 3) residential uses. There are several additional uses of local rather than area-wide significance.

Water enhanced recreational uses comprise both public and privately supported active and passive leisure time pursuits such as golfing, hiking, picnicking, camping, visiting arboreta and wildlife sanctuaries, and strolling on urban promenades or boardwalks.

Tourism, which constitutes a major component of the economic base of eastern Long Island, includes such commercial activities as the construction and operation of hotels, motels, restaurants, art galleries, and gift shops and the construction, sale and/or rental and maintenance of seasonal and second homes.

Water enhanced residential uses comprises year-round recreation-oriented housing--in single family homes, rental apartments or condominiums--occupied both by young and middle aged households and by elderly retirees. It also comprises health-related housing for the aged, such as that found in the City of Long Beach.

Miscellaneous uses, generally of limited extent and impact, include duck farming, sand mining, and the operation of airports and heliports

where the primary flight paths are over open water. They also include educational and cultural endeavors that are enriched by rather than dependent upon a coastal location, among them the restoration of historic sites and structures evocative of Long Island's past dependence on its marine environment.

All other uses and activities must be regarded as non-water related and therefore deserving of the lowest priority among the permissible uses and activities identified on the basis of the land capability analysis.

In accordance with the requirements of Section 305(b)(5) of the Coastal Zone Management Act, 15 C.F.R. 923.14(a), and NOAA's Threshold Paper No. 2, the Nassau-Suffolk Regional Planning Board proposes adoption of the following guidelines for the determination of priorities among uses throughout the coastal zone:

First priority should be accorded to uses and activities that are 1) permissible, or environmentally acceptable; 2) water dependent, or requiring a coastal location; and 3) recommended in regional and local land use plans. Uses and activities recommended in regional and local plans are presumed to be compatible with existing development and therefore socially and economically acceptable.

Second priority should be accorded to uses and activities that are 1) permissible; 2) water enhanced, or benefiting from rather than requiring a coastal location; and 3) recommended in regional and local land use plans.

Third priority should be accorded to uses and activities that are 1) permissible; 2) water dependent; 3) not necessarily contemplated in regional and local land use plans; but 4) which serve national, state-wide, or regional needs that cannot be served at alternative locations.

It is likely that sites within designated Geographic Areas of Particular Concern will suffice for most of the currently identified national, state, and regional needs that can be accommodated on Long Island.

Lowest priority should be accorded to uses and activities that 1) are not among those listed as permissible, 2) do not require or benefit from a coastal location, and 3) are not contemplated in regional and local plans. The remains of a number of uses that were once water dependent but are no longer so and, in fact, are now obsolete, continue to preempt waterfront sites. These comprise coastal defense structures, abandoned oil storage tanks, industrial buildings, and warehouses. G.A.P.C. designation will be utilized to encourage the replanning of older port areas and to foster the relocation of oil storage facilities--except those needed to supply marine traffic, sewage treatment plants and incinerators.

Guidelines on priority of uses for specific resource types within the coastal zone are generally incorporated in the Land Capability Classification Systems's listing of permissible uses for Units III and IV. Since the resource types of concern are almost invariably included in one or the other of these Capability Units, and since the range of acceptable uses in each unit is extremely limited, almost any one of the permissible uses could be regarded as a priority use.

The following table, derived from Chart 1 of the Land Capability Memo, lists the specific resource types or portions thereof in Capability Units III and IV and the preferred use or uses for each type.

Specific Resource Types Within the Coastal Zone - Preferred Uses

Land Capability Unit III

<u>Resource Type</u>	<u>Preferred Use or Uses</u>
critical watershed areas, including slopes immediately adjacent to surface waters	low density, residential, open space, passive recreation
prime aquifer recharge areas	same as above
dunes	recreation, education, research
swales	same as above
habitats of significant species	same as above
beaches	same as above
prime farmland	production

Land Capability Unit IV

<u>Resource Type</u>	<u>Preferred Use or Uses</u>
tidal wetlands	education, research, passive recreation
fresh water marsh	same as above
base of swales	"
bluff face	"
habitats of protected or endangered species	"
areas immediately adjacent waters	"
areas of geologic significance	"

COASTAL ZONE MANAGEMENT PROGRAM
EVALUATION OF LOCAL LAND USE PLANS

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H. Lee Dennison Office Building
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Dr. Lee E. Koppelman
Project Director

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ACTIVITY III - I: Review of Local Plans in the Nassau-Suffolk Region

The following analysis reviews the comprehensive plans of the two cities, thirteen towns, two regional groups of municipalities, and thirty-eight villages that have completed a plan during the past twenty years. Twenty-eight villages that have land on the coastal edge have never completed a comprehensive plan.

A majority of the plans were completed by consultants to the municipalities. A few were done by the County planning agencies under contract to the municipalities and the planning boards of some municipalities completed or modified the plans for their own areas.

The majority of plans are concerned with local land use issues that affect property within their boundaries, while a few take into account certain regional needs, such as recreation and certain commercial and industrial facilities. Issues such as water quality and quantity are addressed in a number of the plans and the need for sewerage to protect the ground water supply or to maintain quality of the surrounding water bodies are also covered.

A number of the plans recognize the needs for certain uses in the coastal zone. However, this is not reflected in their current zoning, subdivision or other types of local regulation. The following summary of each of the local plans describes the elements in each that are related to coastal zone activities.

CITY OF GLEN COVE

The last revisions to the City plan were made in 1966. The housing recommendations indicated that there should be a variety of all types of housing from apartments to low-density single family homes. The high density housing should be related to the central business district while most of the low density is to be near the shore.

The plan recommends maintaining the predominantly industrial district that encompasses the eastern two-thirds of Glen Cove Creek. At the western end of Glen Cove Creek, a public marina area is proposed in a location that already has some private marina uses.

The major recreation proposals involve the acquisition of the Bayberry Club to provide additional public frontage on Dosoris Pond and to acquire the pond area that extends south of Lattingtown Road. This latter acquisition would provide a continuous greenbelt on the City's eastern border and would allow hiking and bicycling out to Long Island Sound.

CITY OF LONG BEACH

A detailed comprehensive plan for the City was completed in 1970. The residential recommendations of this plan are concerned with the existing high density uses through the City. An overall density reduction is the aim of the plan. In the waterfront apartment zone, less ground coverage, with a trade-off in increased height of the presently allowed six-stories, is proposed to off-set the solid wall conditions caused by existing apartments which effectively block the ocean front from view. Higher parking standards for apartments is also recommended to alleviate conflicts that occur in the beach area which generates large amounts of vehicles parked in the vicinity of the oceanfront. The plan recommends re-development of blighted single and two-family areas into a low rise median density apartment area. This generally applies to the waterfront in the western portion of the City. The plan also calls for strict enforcement of occu-

pancy in the one and two-family zones where many illegal occupancies currently exist. There is also a proposal for limiting nursing homes and related facilities so as not to increase the senior citizen population which is presently higher than anywhere else in Nassau County.

The major commercial recommendations do not relate to the shorefront since they are concerned with a rehabilitation plan for the central business district. An industrial area of twelve acres is recommended on a site that borders Reynolds Channel. The plan notes that there is a deficiency of at least one-hundred acres in park facilities. However, major new land acquisitions are not suggested due to the built-up nature of the City. Emphasis is on creating new recreational facilities on or adjacent to the boardwalk along with a marina facility on Reynolds Channel.

The plan proposes expansion of the existing sewerage treatment plant with a consideration of an ocean outfall to replace the one in Reynolds Channel along with the replacement of sewer pipes where a large amount of intrusion of ground water is overtaxing the capacity of the plant. Replacement of water mains is also an important plan recommendation. The plan points out that the incinerator residue from the City plant can no longer be accommodated and three alternate plans for disposal are recommended.

A directional master plan summary was prepared by the City Planning Department and the Nassau County Planning Commission in 1977, and it reinforces some of the earlier plan recommendations. In addition, it emphasizes the recreational-resort potential of the City of Long Beach and makes specific plans for convention and related resort structures in the central portion of the City that adjoins the boardwalk.

TOWN OF BABYLON

The Town plan was completed in 1970. Most of the recommendations are general; however, there are a few that have specific recommendations to land in the coastal

zone. There are no significant density change recommendations; however, the criteria for new apartments is to locate them throughout all of the business areas in the Town or in proximity to the major recreational or institutional parcels that exist.

The recreational section of the plan emphasizes the development of facilities on the mainland rather than the barrier beach. A few neighborhood playgrounds are proposed in the coastal zone; however, no new major waterfront parks are included. A greenbelt from Babylon to Wyandanch is proposed in order to protect the land adjacent to the Carll's River.

The plan notes a future deficiency of drinking water and recommends that runoff, treated waste water, and some stream surface waters be returned to the ground via recharge wells or basins. The drainage plan also envisions the maximum use of recharge basins where soil conditions permit. Sewage disposal for the Town is proposed to be in accord with the County plans and consideration of a regional approach is also indicated in dealing with solid waste disposal.

TOWN OF BROOKHAVEN

The Town plan completed in 1975 recommends a population maximum of 750,000 people in order to protect the moraine and provide for aquifer recharge. To achieve these objectives, the plan envisions maximum use of Section 281, planned unit developments and transfer of development rights in order to preserve open space. The plan identifies the wetlands and recommends acquisition of the major areas and protection of the remainder through enforcement of the State law and the use of clustering. In the flood plains, rural density open space development is recommended where the land is still primarily vacant. The plan proposes protection of the barrier beaches by limiting motor vehicles, controlling the size of housing that is constructed on single ownership lots and generally discouraging new construction directly on the beach.

The plan recommends the creation of a series of historic districts throughout the Town in order to preserve some of the unique structures that still exist. Most of the areas are related to the coastal zone area and include Stony Brook, Setauket, Yaphank, Miller Place, Mt. Sinai, Brookhaven, East Moriches, Eastport and South Manor.

The housing recommendations in the plan include the proposals to concentrate new multi-family units in major centers rather than allowing them to locate on a scattered basis. Since most of the centers in the unincorporated area of the Town are removed from the shore, this will mean that most apartments would be on inland sites.

The plan proposes a marine recreational zoning category to limit commercial uses to those that are appropriate on the waterfront. This device can also be used to expand commercial water-related uses and limit residential development in the 100 year flood plain area. An example of this type of commercial development is a resort hotel on the east side of the Terrell River which would complement a possible County park acquisition and eliminate duck farm uses that are presently polluting the river. The recreation proposals in the plan provide for additional space for Town needs and a bikeway proposal envisions a right-of-way that would run adjacent to the Peconic River park.

TOWN OF EAST HAMPTON

The basic goals of the East Hampton Town plan completed in 1967 are to preserve scenic, historic and topographical features in the Town, to promote tourism and recreation as the major industry, to develop selected areas around bays, harbors and the ocean for recreation and tourist use, to provide as much public access to the water as possible and to limit the overall residential development so that it is in line with the ground water capacity of the Town.

The recreation proposals are based on the acquisition of enough land to meet national recreation administration standards. Included is the maximum

public acquisition of the waterfront through purchase or the use of clustering, and the requirement that easements be granted in private subdivisions in order to maintain water access. There are specific recommendations for the County to add to its park holdings the large tract of land between Cedar Point Park and North West Harbor wetlands. The State recommendations include acquisition of the Curtiss-Wright property adjacent to Hither Hills State Park and the vacant land at Montauk Point. This latter parcel has not been acquired by Suffolk County.

The conservation section of the plan calls for preservation of wetlands, dunes, beaches, bluffs and other unique features in the Town. Pollution control and periodic dredging of the north end of Lake Montauk is included in this section.

There are specific recommendations concerning the location of water related commercial facilities. The establishment of transient housing areas which would include things like hotels, motels and restaurants are a major plan proposal. The maintenance of industrial uses on Ft. Pond Bay coupled with the establishment of an ocean science laboratory is recommended.

In the area of utilities, the plan calls for the extension of water mains where warranted and the provision of sewers in high density areas. The drainage suggestions include the maximum use of recharge basins and the development of a comprehensive drainage plan. The refuse disposal section indicates that additional land fill capacity will be needed by 1980. Expansion of existing sites, acquisition of new ones, or limited burning are suggested alternatives.

TOWN OF HEMPSTEAD

The Town plan was completed in 1967 and it is a generalized proposal with a limited amount of specific recommendations that directly relate to land on the coastal edge. There are no specific residential recommendations that would affect the shore other than a proposal to maintain existing densities. Water-

front commercial recommendations are made for the Seaford and Wantagh areas. The reservation of land for industrial purposes includes the waterfront land in parts of Inwood, Island Park and Oceanside.

In the recreation section, there are no specific acquisition proposals; instead, the emphasis is on development of existing land. Boat launching facilities are recommended at Oceanside and Merrick while wetlands preserve areas similar to facilities in Oceanside are recommended for other areas along the waterfront. A waterways management plan is proposed in order to maintain navigation and provide access to the wetlands. The portion of the plan concerning beach erosion discusses the desirability of a Town policy for protecting its shores from erosion.

In the area of refuse disposal, the plan determines that there is a need for improved incineration capacity in order to phase out land fill operations that presently exist along the shore. This recommendation is being implemented by the construction of a central resources recovery operation.

The plan proposes a number of regulatory devices that would relate to development in the coastal zone. Included is a minimum elevation, earth and soil removal controls and dredging permits only for public purposes.

TOWN OF HUNTINGTON

The latest plan of the Town was completed in 1965. Its major recommendations relating to the coastal zone include a proposed Huntington Harbor rehabilitation area. The plan recommends a maximum amount of open space around the harbor by acquisition and calls for a relationship between the harbor area and the Huntington central business district. Only harbor oriented commercial uses are to be allowed on the waterfront and the slopes surrounding the harbor are to be preserved. The sand and gravel processing is to be eliminated.

In addition to the Huntington Harbor area, other water-related parks are recommended at Northport Harbor and at Eaton's Neck.

The only industrial use on the shore is the existing LILCO facility. All other new industry is near the railroad or in the southern portion of the Town.

The sewerage recommendations include expanding the existing Huntington plant to serve those surrounding areas within which gravity flow to the plant would be possible.

TOWN OF ISLIP

The preparation of the latest Town plan has extended from 1972 until the present time. The final volumes in the overall plan are expected to be completed in 1978. This evaluation is concerned with the available volumes and their relationship to coastal zone activities. The goals of the plan that relate to coastal activities are the protection of adequate and accessible recreational areas for all citizens of the Town.

The plan recommends a water management program to maintain current water quality. It recommends that sewers be built to proper capacity and not be located in environmentally sensitive areas. Any development in wetlands and watercourses is to be subject to Planning Department review. Assistance in the wetlands management area from higher levels of government is suggested. The plan indicates detailed maps where wetlands and watercourses management must be implemented.

The Bay Islands in the Town are proposed as nature preserves with controlled access to each of them. There are a number of suggestions for reducing the erosion of the dunes on Fire Island. They include a prohibition of vehicular traffic, a limit to construction on the dunes, and the planting of beach grass for stabilization.

The recreational recommendations in the plan that relate to the shoreline include the following subjects: a wetlands acquisition program, a nature pre-

serve district for areas of scenic or ecological value, a planned landmark preservation district, a flood plain ordinance to protect ponds, streams and wetlands, a reduction in the tax burdens on private open space, and the acquisition of scenic easements.

The recreation portion of the plan also emphasizes boat launching facilities rather than new marinas. It proposes to increase the use of the Fire Island Beaches by reducing the rates on the ferry and leasing some of the Federal lands on the Island for additional Town recreational facilities. Bus transportation to the Bayshore and Sayville ferry terminals is recommended to increase the accessibility to the oceanfront beaches and a bicycle network that leads to the shore area is proposed to improve accessibility to recreation resources.

There are separate volumes in the plan that are concerned with the individual hamlets in the Town. The hamlet plan for the Bay Shore community relates to a renewal of the central business district and the incorporation of a proposed County mini center in the downtown area.

Part of the business district is adjacent to Watchogue Creek. New apartments and commercial uses are recommended along the creek and pedestrian access is proposed between this area and the marina district on the Great South Bay. The idea in the plan is to increase public recreational opportunities along the waterfront. The Bay Shore plan also has a historic preservation component and it recommends the planned landmarks preservation district. Tax incentives and other ideas are put forth to implement the preservation proposal.

The hamlet plans for the waterfront communities of Islip, East Islip and Great River include recommendations for easements along the Connetquot River, Champlin Creek, and Orowoc Creek. Only recreational and residential uses near the shore are recommended in these communities with one exception. The upper end of Orowoc Creek is proposed as a marine business area. The plan envisions a phaseout of industrial uses and the establishment of more tourist related

uses. The idea is to create a waterfront commercial area that is functional, attractive, and provides a view of the water from Montauk Highway.

TOWN OF NORTH HEMPSTEAD

The Town of North Hempstead plan completed in 1969 has a general section and a specific plan for the Hempstead Harbor - Port Washington Sand Pits area. The general plan has no specific proposals for residential, commercial or industrial uses in the waterfront area. In the utilities area, it recognizes that the water supply system is inadequate and regional cooperation would be required. Proposals for sewerage include extending sewers to the unserved areas of the Town. In the solid waste disposal field, a third incinerator is recommended on the Sperry property in North New Hyde Park.

The plan for the Sand Pits recommends a self-contained residential community in the center of the pits. The plan recommends 240 acres of planned industrial use at the south end, 200 additional park acres at the north end and 50 acres of new Town recreation to serve the residential units. The plan also calls for public use of the entire west side of Hempstead Harbor. At the present time, the only public uses are Town and County beaches and an incinerator. Facilities such as marinas and pedestrian areas are envisioned on the shore edge.

In 1972 the Town Planning Board produced a more detailed report that included a section on the Port Washington sand pits. The recommended uses were similar to the original ideas in the 1969 Town plan.

TOWN OF OYSTER BAY

The Town plan completed in 1972 has a limited number of recommendations that affect the coastal zone area due to the built-up nature of the Town. However, there are special sections on waterfront communities such as Glenwood Landing and Oyster Bay that relate to coastal zone activities.

The present oil storage on the waterfront is proposed to be replaced with

a pipe line system down the center of Long Island. In the Glenwood Landing area where there is presently a number of industrial uses including oil storage, the plan proposes changing the waterfront from predominantly industrial use to a combination of public access and other related uses, such as marinas and boatels.

Proposals for the central business district adjacent to the harbor in the hamlet of Oyster Bay include a phase out of the light industrial uses on the waterfront and replacing them with water-related commercial uses and additional public access. The business district itself is proposed to have commercial redevelopment, various pedestrian connections from the public buildings and new parking areas in the business district to create a better relationship between the business area and the harbor. A Village green is also proposed along with a series of historic districts in the area to preserve many historic buildings that exist.

The recreational proposals do not include any major new acquisitions on the waterfront. However, they do recommend boat launching facilities at the Florence Avenue Beach in Massapequa and the Centre Island Beach in Bayville. The access to boating facilities is presently deemed acceptable and the plan recommends no new dredging without a determination of how the dredging will affect the ecological balance in the bays around the Town of Oyster Bay.

In the water and sewer proposals, the plan recognizes a need for some recharge to protect the ground water supply. This is necessary both for run-off control and for the recharge of effluent from the sewer system. There is also a recommendation of an extension of the Oyster Bay sewage plant outfall to avoid any harbor pollution.

The solid waste recommendations review the present incineration methods and landfill capacity and indicate that by 1985 the existing facilities will be inadequate. A greater emphasis on recycling is indicated at the present time.

TOWN OF RIVERHEAD

The most recent Riverhead Town plan was completed in 1973. Its major recommendations include a large open space preserve in the southwest portion of the Town adjacent to the Peconic River. A goal of the environmental portion of the plan is to preserve farmlands as long as practical. However, the land use plan shows the farmlands as residential or industrial uses. The plan recommends the protection of the remaining tidal wetlands and salt water marshes that are of good quality and also includes a proposal for flood plain zoning.

The residential recommendations call for the lowest density in Long Island Sound with a higher density along the Peconic Bay. A maximum population of 174,000 is envisioned when the Town is fully developed.

In order to improve views of the Peconic River from the downtown area, higher buildings with less land coverage are proposed where public acquisition is not practical. The creation of a marine business district on the river adjacent to the Riverhead central business district is designed to improve the usability and visibility of the River. Other marine business districts are proposed at Meeting House Creek and in South Jamesport.

Industry in the Town is to be confined to the interior area. The only exception is the Northville dock property which is used for oil importation and storage.

The recreation portion of the plan is concerned with the preservation of specific natural areas such as the Deep Hole Woods, Bating Hollow bluffs and the Roanoke Point woods and fields. Expansion of beaches at Wading River, Hulse Landing, Reeves Beach, Iron Pier and South Jamesport is recommended. A major Town park and beach at the LILCO site is proposed along with fishing piers at Roanoke landing and Penny's landing. The marina at South Jamesport is to be expanded and land to be acquired for a new one on Meeting House Creek - the transient docking facilities at the Riverhead central business district are to be expanded.

The plan recommends the maximum recharge of surface water into the ground water table. The use of clustering to facilitate this drainage is strongly recommended. There is also to be regulations controlling drainage in inland channels in order to prevent salt water intrusion. Public water availability along the shore is also proposed in order to avoid the problems of intrusion of salt water. The recommendation for sewerage and solid waste include sewerage the Riverhead hamlet only and working jointly on the disposal of solid waste with the other east end Towns.

TOWN OF SHELTER ISLAND

A plan for the Town was completed in 1972 by the Suffolk County Planning Commission. The primary goals of the plan were that Shelter Island should remain as a resort community and that the year-round population density should be controlled so that it is related to the water supply. The plan proposes to retain the existing ferry system and not construct any bridges which would accelerate growth on the island. The plan recommends controlling development of the wetlands and woodlands by keeping 1,900 acres in open space. This would be done via purchase, donation, clustering and scenic easements. Clustering of the anticipated development on the Mashomack Forest would set aside a majority of the required acreage in open space. The plan proposes that commercial marinas around the island be limited to areas that have adequate depth and tidal flow so that there is not a significant demand for increased dredging operations.

There are two major areas of commercial activity on the island at the present time, and the plan recommends that higher density uses be concentrated in these two locations. This would allow the construction of two small systems which should be constructed with recharge possibilities to maintain the balance in the underground water reservoir on the island.

TOWN OF SMITHTOWN

The Town plan was completed in 1961. One of its goals is the preservation of wetlands and upstream ponds along with the Long Island Sound shoreline. It recommends low density uses on the shore and along the Nissequogue River. No industrial or commercial uses are proposed on the waterfront.

The County acquisition of the Nissequogue River lands is proposed along with the Town acquisition of the land on the Long Beach peninsula on the Village of Nissequogue.

A detailed plan proposal is made for the San Remo community and it includes studying the feasibility of new dock facilities to serve the Town.

TOWN OF SOUTHAMPTON

The Town of Southampton plan completed in 1970 proposes to relate water resources to maximum development potential. It calls for the creation of a ground water resources budget and recommends maximum recharge to protect the ground water, especially in the marine area and in the various wetland and stream courses throughout the Town. The maximum population of the Town including the five villages within the Town is set at 127,000. The plan calls for public water and sewers to serve the Village residential (higher density) areas and the resort areas. The sewers are to be constructed where there is a density of over five persons per acre and in areas that are major non-residential uses in which large amounts of people congregate. The water supply system recommends a series of public wells in the center of the Town with control over the creation of private wells below the 10 foot contour line. The overall emphasis in the plan on water availability relates to recharge and recycling sewerage treatment plant effluent. The recharge suggestions also include surface water run-off from paved areas. A combination of leaching basins, dry wells and sumps would be used to facilitate recharge.

The major residential recommendations include the usual suburban densities, in addition to an agricultural reserve area and a water catchment area. The former area relies on clustering and other methods to minimize the destruction of farmland while the latter calls for a very low density throughout the district to provide for maximum recharge in the moraine area.

The industrial proposals in the plan do not affect the coastal edge since all proposed industrial uses are to be on inland sites.

The business recommendations include specific areas for transient motels, plus resort and waterfront business uses. Specific resort related recommendations are for the following locations within the Town:

- (1) Seatuck Cove - Eastport
- (2) Weesuck Creek - East Quogue
- (3) West Tiana area
- (4) The area around the Shinnecock Canal
- (5) Shinnecock Inlet area
- (6) The part of Shinnecock Bay west of the Ponquogue Bridge

The major recreation facility proposals in the plan include regional park locations and greenbelt facilities. The regional suggestions are for County park additions at Sears-Bellows, Shinnecock County Beach and a new County facility at Camps Pond in Noyac. The greenbelt proposals are from Kellis Pond to Camps Pond, from Hulse Pond to Whitehill and from Sagaponack to Sag Harbor. The Town park recommendations include eight new waterfront facilities throughout the Town.

The proposals for handling solid waste and scavenger waste include sites in the eastern and western portions of the Town. Packer units are proposed to collect refuse in local communities where no regular collection exists at the present time.

The plan proposes the creation of a historic district in the area in and around Bridgehampton to preserve some of the historic structures. This could be accomplished by a zoning overlay district. Three other zoning overlay districts

are also part of the recommendations. They include an agricultural, tidal wetland and ocean beach and tidal flood plan.

There is a special segment of the plan that is concerned with the barrier beach and Shinnecock Bay. It makes specific recommendations concerning low density use in the vicinity of the bay. It calls for an east and west environmental preserve area to protect the wetlands in the bay. It emphasizes the need for maintaining public land on the oceanfront so that bathing facilities will be available for the maximum population and to supplement the resort facilities. The bay area plan recommends that land and services for boating be combined with those areas where the marshes have been destroyed and there is good flushing action in the bay. The Shinnecock Canal area should accommodate a large amount of the boating and resort facilities while the inlet should accommodate a commercial fishing operation and a public marina.

The plan recommends bluff stabilization in the Shinnecock hills along with an overland drive in the same area which would create a scenic road with a view of the bay from the existing Montauk Highway. Fishing groins are proposed west of Ponquogue Bridge.

There are specific environmental recommendations to protect the significant features of the bay. They include a prohibition on canal dredging into the uplands and they prohibit new boat channels in valuable wetlands. The bulkhead recommendations include placing those bulkheads needed for protection above the upper tidal marshes. To protect the bluffs, there are suggestions to permit construction only in the area that is at least 40 feet inland from the crest of the primary dune.

TOWN OF SOUTHOLD

The Town plan was completed in 1967 and includes revisions through 1969. The plan recommends that the maximum year-round population be limited to 35,000 people which is related to the available water supply according to engineering

studies that were completed during the 1960's.

The plan proposes retaining existing agricultural uses and wetlands in the Town. The methods proposed include a low priority for municipal services in the area, zoning, transfer of development rights and assessment reductions.

The plan proposes the confinement of residential uses to the shore area of the Town with the interior being in the agricultural district. The public water supply for the residential area would be obtained from the Village of Greenport. A recommendation is made to limit dredging new canals and filling wetlands with a major reason being that salt water intrusion will occur with these types of activities.

All industrial uses in the plan are confined to inland sites while most of the commercial uses would also be with one exception. That exception is a new location near the waterfront between the community of Southold and the Village of Greenport. Existing resort commercial areas are proposed to be expanded adjacent to the existing sites on Long Island Sound and the Peconic Bay.

The recreational plans include the location of marinas at Mattituck Creek, James Creek, Wickham Creek and Sage Lane. The salt marsh area north of Orient Point State Park is to be added into the State park limits. The Town beach at Dam Pond is to be expanded to provide additional frontage on the sound. Additional acquisitions are to be made in the Arshamomaque area, Paradise Point Road, at Fishers Island adjacent to the airport, at Marratooka Lake and Deep Hole Creek. Expansion of existing parks at Hog Neck Bay and Laurel Lake are also proposed.

The drainage recommendations include the use of the wetlands to store runoff. The wetlands are to be designated on an official map to prohibit residential encroachment. There is to be more recharge of surface water in order to preserve the limited supply and the construction of low dams for dikes is recommended where feasible in order to restrict fresh water drainage into the surrounding salt water areas.

The sewage plans include service for built-up areas for the Town in order to protect the fresh water resources. The recommendations for the disposal of solid waste include composting to supplement the current methods of sanitary landfill.

There are three airports in the Town, all of which are on the shoreline, and the plan proposes relocating the Mattituck Airport from Peconic Bay to Long Island Sound. The Charles Rose Airport at Orient Point is proposed to be expanded while only repairs and maintenance are proposed for Elizabeth Field on Fishers Island.

THE GREAT NECK PENINSULA

A regional plan for the nine Villages and unincorporated area of the Town of North Hempstead on the Great Neck Peninsula was completed in 1965. In addition, individual plans were completed at the same time for seven of the nine Villages. This analysis also includes the five Villages with waterfront access that prepared separate plans.

The major regional recommendations were a prohibition of all new apartment construction wherever it was possible to re-zone land that is presently set aside for such use. The existing industrial and commercial land use patterns that exist on the shorefront were proposed to be retained. There were no new recreation sites proposed on the waterfront with the exception of a wetlands acquisition recommendation. The peninsula water supply was deemed adequate and therefore, no significant proposals exist in the plan. There was a suggestion for the dredging of Little Neck Bay to provide improved access from the communities along the shore of the Bay. The recommendations for Manhasset Bay involved the identification of the extent of the public interest in any dredging of this Bay before endorsement would be given.

VILLAGE OF GREAT NECK

The plan for the Village proposes no changes in the current residential land use pattern. The existing industrial area that occupies the entire shore-front of the Village is proposed to be maintained.

VILLAGE OF GREAT NECK ESTATES

The plan proposes to maintain the single family residential character of the community. There is a proposal to acquire 50 acres of wetlands adjacent to the Village park properties on the western end of the community where it borders Little Neck Bay.

The Village of Great Neck Estates is presently unsewered and the plan suggests a connection to the Belgrave District if sewerage is warranted in the near future.

VILLAGE OF KENSINGTON

This is primarily a built-up community and the plan recommendations are to maintain prevailing densities. There are no facilities proposals; however, there is a discussion of the possible dredging of Manhasset Bay to provide improved access to the Waterfront recreation area within the Village.

THE VILLAGE OF SADDLE ROCK

This is an entirely built up Village so the plan for this portion of the Great Neck Peninsula recommends no changes in density nor any further land acquisitions, since the Village was deemed to have adequate recreational space and facilities for its future needs.

VILLAGE OF THOMASTON

The plan proposes a limiting of the density by reducing existing and potential apartment development. There are no new park recommendations because there is

limited land available in the Village and no shorefront land available for acquisition.

NORTHERN OYSTER BAY VILLAGES

In 1971 a series of plans were completed for the estate Villages in Northern Oyster Bay Town. The following comments refer to the recommendations for all of the Villages. The plan recommends that policies be encouraged to allow a 3% annual growth rate in all of the Villages. It recommends a minimal disturbance of the natural shorefront in order to avoid storm damage at a future date. The suggestions for the golf clubs in the Villages are that they should be retained by a tax assessment reduction or a scenic easement. There should be no acquisition of land for recreational expansion. The only acquisitions that should occur would be to conserve unique natural resource.

The plan recommends that no additional medium density housing units be authorized; only low density development should be allowed. There should be no new commercial or industrial uses in any of the Villages. The following are the individual recommendations for those Villages that are on the waterfront in the Northern Oyster Bay area:

VILLAGE OF CENTRE ISLAND

The plan recommends no public sewer or water system for the Village. The 3 acre minimum lot size is to be maintained to keep the density as low as possible and avoid the need for new public facilities. The wetlands area in the center of the Village that is partially Village owned should be fully brought under Village control. The 130 acres of beaches should be protected from erosion.

VILLAGE OF COVE NECK

The plan recommends protecting the remaining marshlands via purchase, gift, or scenic easement. Buildings should be discouraged from being located

near the shore to stop erosion of the beaches and steep slopes in the area. The use of clustering in the area that is zoned for 4 acre minimum lot sizes should achieve this objective. The one recommended scenic road in the area is Sagamore Hill Road.

VILLAGE OF LATTINGTOWN

The Village is presently 50% developed and the plan recommends preserving wetlands and woodlands via clustering or other means. Specific areas to be preserved are the Lattingtown Woods, the Long Island Sound frontage near Peacock Lane, Frost Creek, and the pond which is west of Frost Creek. A historic district is also recommended in the area west of Frost Creek. Greenbelts are recommended along all of the creeks in the Village and a scenic easement is proposed on the Creek Club. Horse Hollow Road, Bayville Road and Feeks Lane are recommended as scenic roads.

VILLAGE OF LAUREL HOLLOW

The plan recommends the protection of the steep slopes in the Village to avoid erosion and siltation problems. The stream beds are to be protected both for the maintenance of the natural drainage and for scenic purposes. The acquisition of the land or an easement on the property south of St. John's Pond and all along Cold Spring Harbor would be necessary to carry out this idea. The woodlands east of the Fox Hollow preserve are also part of the preservation recommendations. The proposed scenic roads are Route 25A and Moore's Hill Road.

VILLAGE OF MILL NECK

The plan proposes a maintenance of the current low density zoning which requires minimum lots of 3 or 5 acres. There are 600 acres of undeveloped land in the Village of which 240 acres are water bodies and wetlands and 60 acres classified as sandy beach. These should not be developed. Of the remaining

300 acres, 50 are on steep slopes and development should not occur on this land.

The plan recommends private and governmental efforts to acquire the unique scenic and ecologically valuable parcels in the Village. The emphasis here should be on land along Beaver Lake and its tributaries. Roads in the Village that are recommended as scenic corridors are Cleft Road, Mill Neck Road, West Shore Road and Mill Hill Road.

OYSTER BAY COVE

The plan recommends three priorities for natural resource conservation. They are the steeply wooded slopes, the large woodlands south of Route 25A and land adjacent to the two streams in the Village. The latter preservation could reserve land for hiking and nature trails. The plan also recommends some preservation of the remaining limited shore frontage along Oyster Bay Harbor. The recommended scenic roads are Route 25A and Cove Road.

VILLAGE OF BABYLON

A plan was completed for the Village in 1960. Its major recommendations that relate to the coastal portion of the Village are that higher densities should only be allowed in the business district, while the area outside of the central business district which includes the shorefront shall remain as primarily single family uses. The plan recommends a marine activities district in the southeast portion of the Village. This would include most boating activities but would prohibit most commercial fishing operations.

The parks recommendations include two marinas, one on Sumpwams Creek and the other on Great South Bay. The drainage program is oriented towards a system of catch basins and piping which would drain most parts of the Village to the nearest stream. The maintenance of stream channels is also included in this section. The issue of sewers is covered by recommending treatment for the entire Village, and limiting the density of multiple units where sewers are not available.

VILLAGE OF BAYVILLE

The goals of the 1965 Village plan are as follows: maintain the single family density and permit no multiple dwellings. Allow the business district to be expanded only to serve local needs and provide waterfront business uses that would be appropriately related to beach activities, to not allow industrial uses in the Village and to preserve the marshes and shoreline of the Village.

The plan recommends some type of control of the conversion of summer units to year-round units so that they would be able to meet Village standards.

A special business area is proposed at the west end of the Village where various commercial activities, such as motels and restaurants, are now located adjacent to the beaches and other recreational uses. A waterfront business area is proposed adjacent to the Bayville Bridge. The recreational portion of the plan recommends the acquisition of a Village beach on Long Island Sound in the east end of the community. Also proposed is a marina on Oyster Bay Harbor and the preservation of the wetlands along Mill Neck Creek.

The plan indicates that a drainage study is needed to control run-off, to provide a means of draining poorly maintained privately owned streets and flooding in low-lying areas. A provision for recharge is also included in the recommendations.

VILLAGE OF EAST HAMPTON

A plan for the Village was completed in conjunction with the 1967 Town plan. It calls for maximum utilization of the oceanfront and interior water bodies for recreational use. The plan proposes that commercial and industrial uses be primarily confined to the central business district. In the area of historic preservation, the Village should assist in some way that will provide for a continual maintenance of unique structures in the Town.

There are specific recreational proposals that relate directly to the coastal zone. One is the acquisition of the Sea Spray Inn property which would provide additional public oceanfront recreation. Another is to acquire property at Georgica Pond for preservation of unique scenic values in that part of the Village.

VILLAGE OF FREEPORT

The last complete master plan for the Village which was issued in 1964 recommends the maintenance and expansion of two major mixed use industrial areas in the east and west ends of the Village, both of which have direct access to the waterfront. Marine commercial uses are to be confined to the Woodcleft Canal and Hudson Bay. The remainder of the Village's waterfront is built up with residential uses or recreational uses.

The plan recommends the development of County and Town park areas that are in or adjacent to the Village. These suggestions have already been implemented. The development of the New York City watershed lands is also recommended and this has been partially implemented.

The recommendations for sewerage include providing service for the small part of the village that is presently unsewered. The only recommendations for storm drainage are related to necessary improvements in the southern portion of the district. Some of the drainage ideas are related to the County improvement project on Atlantic Avenue which has already been completed.

The Village Planning Board completed a special planning study in 1976 that was concerned with recommendations for four heavily used sections of the Freeport waterfront.

The west end of the Village which comprises mixed industrial and commercial uses around a series of canals is recommended for a conversion to condominium use. There is already some housing in this section and the plan does not envision extensive needs for new commercial and industrial uses.

The Woodcleft Bay section of the Village is proposed as a nautical mile. This extensively developed stretch of marine commercial uses extends all along the Bay. The plan recommends the elimination of the few light manufacturing uses in the area along with public acquisition to obtain a view of the water and create a small park area. The overall idea is to encourage additional marine related shops and a nautical museum, in addition to other commercial activities that presently exist.

The Hudson Bay area is proposed for maintenance in its present commercial usage. The only new recommendation is to create a public fishing pier on land that is presently owned by the Town of Hempstead.

In the South Main Street area, the plan recommends maintaining the present industrial and commercial uses along the waterfront. Public access to Freeport Creek is recommended within the industrial park area.

VILLAGE OF GREENPORT

The Village plan was completed in 1967 and its major emphasis is on a better relationship between the central business district and the waterfront. The plan recommends additional public space along the shore within the Village. It emphasizes public recreation and sitting space rather than additional marinas. The plan recommends a new resort type business area adjacent to the waterfront with pedestrian walks that lead from the business district to this area.

A deep water port is not recommended and the plan calls for the consolidation and modernization of industrial uses such as fish processing, marine construction and storage into the northeast sector of the Village's coastline.

The existing watershed area comprising 250 acres is to be maintained and used for camping, picnicing, nature studies and other passive uses. The Village presently has a water supply system which the plan recommends be expanded to serve areas in the Town of Southold, both east and west of the Village.

It is proposed to treat the effluent from the present treatment plant in order to discharge directly into the ground rather than Long Island Sound in order to maintain the water supply in the north fork.

VILLAGE OF ISLAND PARK

The Village plan completed in 1963 recommends that most of the waterfront area be retained for single family units and that medium density housing be located on major roads and around the central business district.

A marine commercial area is recommended for the Bridge Plaza area. The plan envisions a marina-boatel and related uses for the site. The existing industry that is located along the shore of the Village is to be maintained. The only new waterfront park recommendation is in the northern part of the Village at Mud Creek.

VILLAGE OF LINDENHURST

The latest Village plan is dated 1962. The residential recommendations include the development of apartments in the central business district and in the central waterfront area on Great South Bay. The latter recommendation envisions a residential-resort type area that would include a marina and related marine commercial uses in the central portion of the community. The parks recommendations are mainly concerned with development of the Village beach and acquiring additions to a few of the park areas that are in the proximity of creeks in the Village.

Sewers are recommended for the entire Village and it is indicated that they should be provided on a regional basis. The drainage improvements include extension of lines to facilitate drainage into streams, in addition to the provisions for recharge of some of the run-off into the ground water table.

VILLAGE OF LLOYD HARBOR

The original Village plan was completed in 1965 and a few revisions were proposed in 1976. The plan calls for maintaining the two acre residential patterns in the Village and discourages the introduction of commercial or industrial uses. A special use permit for the development of large parcels for uses such as institutions is recommended.

The recreational recommendations include acquisition and construction of a site for the boat launching facility and a public access point to the harbor. The acquisition of wetlands and a sandspit adjacent to Lloyd Harbor and Cold Spring Harbor is also proposed.

A plan recommendation for a flood plain district indicates that all land below the 10 foot contour line be restricted and no development of permanent housing units be allowed below this contour.

The 1976 revisions include a proposal for allowing some non-residential tax producing uses that would be in character with the single family home development in the Village. There was also a recommendation to expand the public water supply system to serve the entire Village.

VILLAGE OF MASSAPEQUA PARK

Since this Village is almost entirely built up, the 1971 plan recommends minor changes in the overall land use pattern of the area. In that part of the Village that has access to the water, there is only one recommended land use change and that is for a series of apartments facing on Jones Creek. A passive recreation area is recommended for a four acre undeveloped park that faces the Bay.

There are no significant changes in the storm drainage system other than to complete certain minor missing links. There is also a recommendation to

add additional curbing where it does not presently exist in order to facilitate the drainage since there is very little change in topography throughout the Village.

VILLAGE OF NORTH HAVEN

The original master plan for the Village was done by a consultant in 1961. It was revised by the Suffolk County Planning Department in 1973. The latest plan has as its goals the protection of the very limited water supply within the Village, preservation of the wetlands, limiting the erosion on the bluffs and avoiding construction in areas such as flood plains.

The Village is presently served by private wells and studies have shown that the importation of public water would be very expensive. Therefore, the Village must protect its limited supply and the plan recommends maintaining the present density that is based on one and two-acre minimum lot sizes. Clustering within these two zones is recommended in order to reduce the amount of impervious surfaces that are added and, therefore, allow the maximum recharge of the water into the ground. The plan also recommends the construction of sewers with full recharge in order to protect the quality of the ground water and maintain the quantity of water that presently exists under the Village.

A flood plain zone is also a part of the plan recommendations and the goal is to prohibit development in areas that are subject to flooding.

VILLAGE OF NORTHPORT

The Village plan completed in 1965 calls for the shorefront area to be used primarily for single family homes and various public uses. Existing shipyard and marina uses that are on the shore are also proposed to be retained. There is to be a limited expansion of the central business district which adjoins the waterfront. Parking, circulation and buffer improvements are designed to enhance the business area. The plan proposed a new location for the Village Hall on

Town land on the harbor. It has since been located at the other end of the central business district and the waterfront has been retained in open use.

The major recreational proposal in the plan is in addition to the Village beach adjacent to the existing Steers Beach.

The plan recommends a study to determine whether sewage should be a Village or County responsibility. The present Village plant serves a small portion of the Village and some Town land near the harbor outside of the Village limits. A special study of drainage problems is recommended with no specific proposals.

VILLAGE OF PATCHOGUE

The Patchogue Village plan completed in 1959 recommends the retention of heavy industry on the north part of the Patchogue River. On the southern part of the river it is proposed to have a combination of light industry, various public uses, and low density residential uses. The bay frontage is to have a combination of public and low density residential uses.

The sewerage recommendations include the expansion of the existing service area that is presently served by a small primary treatment plant at the head of the Patchogue River. When the lines are extended to serve the entire Village, a new plant is proposed on the Great South Bay along with an outfall into the Bay. The existing plant is proposed to be maintained as an auxilliary use.

The public water recommendations include the expansion of mains to serve the northwest part of the Village that relies upon private wells.

The overall drainage recommendations include replacement of the present seepage basins with a positive drainage system. This positive drainage system would lead to the nearest creek, lake, or the Great South Bay. There is a proposal for preventing a flooding condition in the southeast portion of the Village. The plan is to create a dike along the bay frontage, or to raise the elevation of the entire area not subject to flooding.

Recreation proposals include a new park on Tuthill's Creek along with expansion of other waterfront park areas.

VILLAGE OF PORT JEFFERSON

The Village plan completed in 1965 recommends a conversion of Port Jefferson Harbor from primarily industrial and commercial to a combination of recreational and industrial. The industrial uses are to be confined to the northwest portion of the harbor adjacent to the LILCO plant. The creation of pipe line and conveyer system for bulk unloading and transfer to an inland site is the primary means of reducing the amount of industrial space currently occupying the harbor. The plan indicates severe recreational deficiencies and therefore the expansion of private recreational uses in the harbor along with a strip of public and private recreation on the Village's frontage on Long Island Sound and Mt. Sinai Harbor are recommended. A series of road relocations in the central business district are proposed in order to reduce traffic and enhance the desirability of the downtown area. Additional business district parking is proposed and a better relationship between the central business district and the waterfront is seen as a way of reversing a decline in the business district.

VILLAGE OF QUOGUE

The Village plan completed in 1970 calls for a maximum year-round population of the Village be set at 6,000 people. The plan calls for expanding recreational opportunities on the mainland and on the barrier beach. The entire waterfront of the Village is to be retained in low density recreational uses. The business uses are to be confined to the Village center and a portion of Montauk Highway.

The plan recommends a Village beach with at least 500 feet on the ocean. In addition, shuttle bus service to this facility and all other recreational facilities is proposed in order to minimize adverse affects on the wetlands and dune lands from the construction of major parking facilities. This suggestion was designed to alleviate some of the traffic problems that exist on the current bridge in the Village leading from the mainland to the barrier beach.

The plan recommends preserving a number of natural areas in the Village and strongly endorses the idea of clustering to achieve some of the preservation. Those areas to be served include Penniman Pond, Stone Creek and Phillips Creek.

In the utility section of the plan, there is a proposal for expansion of the public water supply to the northern part of the Village. The solid waste recommendations include a phase-out of the Village dump due to possible contamination of the ground water and joining with the Town of Southampton in disposing of solid waste.

In order to achieve the preservation objectives in the plan, two overlay districts are proposed. One is a tidal wetland overlay and the other is a tidal flood plan. Within these areas, a planned unit development approach or a transfer of developments rights is recommended to allow development to occur which will not adversely affect wetlands or be built on sites that are subject to flooding.

ROSLYN WATERFRONT PLAN

The Village of Roslyn had a plan prepared in 1974 for the portion of the Village that faces on the southerly end of Hempstead Harbor. The plan calls for the preservation of the historic structures of the area and some of the wetlands that exist on the western portion of the harbor. Its main goals are to minimize the effects of flooding, control the run-off from storm water and various other discharges into the harbor, and to remove the material that is silted into the harbor. In addition, the plan recommends the expansion of recreational opportunities near the waterfront and provides a pedestrian linkage

plan that ties together the waterfront, the business district, the historic area and the existing recreational uses around the main pond in the center of the Village. New locations for boat moorings, marinas, boat launching, recreational facilities and restaurants are proposed for parts of the harbor that are now occupied by industrial uses. The plan recommends removal of some of the obsolete industrial uses and an expansion of the commercial uses to the north of the present business district. It is noted that this would require improved access to the waterfront and an expansion of parking facilities in the area. A reconstruction of the bulkhead along the waterfront by the adjacent owners is also recommended. This would be needed to implement the pedestrian walkway along the shore and would allow the Corp of Engineers to maintain the 6 foot channel that was originally authorized in 1910.

The plan recommends various zoning changes and also provides for a flood district being incorporated into the zoning ordinance to prohibit uses along the harbor that would be adversely affected by high tides.

SAG HARBOR BUSINESS DISTRICT PLAN

The 1975 village plan recommended that a waterfront business district be created. In the district would be uses such as restaurants, marinas and boat storage. The plan suggests requiring performance standards in the district. An expanded pedestrian network was recommended in order to relate the nearby central business district to the waterfront. Multi-family housing units should be allowed in the business area as a special permit, and they should be tied in to the proposed sewer system that will serve the downtown portion of the Village. Part of the business district has drainage problems, and, therefore, a business sub-district is proposed in which a specific drainage plan would be required before development is permitted.

A special residential area is proposed that would border the business district and have frontage on the water. Within this area, clustering is to be encouraged

in order to preserve some of the waterfront views and to maintain access to the waterfront for all residents of the area. In the residential district that surrounds the business area, strong preservation controls are indicated in order to protect the many historic structures that exist in the Village.

VILLAGE OF SEA CLIFF

The comprehensive plan for the Village was completed in 1970. The basic recommendations are that there should be no new two-family and multi-family uses allowed outside of the immediate central business district. The central business district is slated for minor improvements and limited expansion. The only other commercial area should be Glen Cove Avenue and no industrial uses should be encouraged in the Village.

Unique architectural characteristics of the Village are recognized in the plan so that preservation and rehabilitation of some of the important structures is suggested. Recommendations are also made for architectural controls within the Village. The plan indicates that the Village has a deficit in total recreational space for its current and expected residents. However, the emphasis in the plan is on development of existing parks rather than any major new acquisitions. Specific recommendations along these lines include rebuilding the Village beach pavilion relocating a drainage discharge that would affect the usefulness of the beach area, improving the stairways on the steep slopes that lead to the waterfront, along with stabilization of these slopes and the creation of a waterfront promenade which would include sitting areas and fishing piers.

In the area of public utilities, the plan recommends overall drainage in accord with a plan completed a decade ago. Included are use of leaching facilities and curbing along streets to return water to the ground and not allow it to run off into the harbor. The recommendations for public water supply include cooperation of the private Sea Cliff Water Company with other suppliers on a

regional basis. The sewerage recommendations are for treatment in accord with County plans that call for expansion of a plant in the City of Glen Cove to serve the Village of Sea Cliff. The refuse disposal recommendations include the proposal for using the new Glen Cove plant as a replacement for facilities provided by the Town of Oyster Bay.

VILLAGE OF SOUTHAMPTON

The Village plan was completed in 1970 and is part of an overall plan for the Southampton community which includes the Town of Southampton and the Village of Quogue. The plan recommends a maximum population of 12,500 for the Village of Southampton. It calls for the expansion of recreation on both the barrier beach and the mainland. The southeastern part of the Village is to be an agricultural reserve. The suggestion here is to allow residential development at the periphery of the farmland and to create a greenbelt to preserve the watershed. The greenbelt will form a buffer between the agricultural lands and the residential areas. Business activities are to be confined to the central business district and the northeast corner of the Village with no commercial uses on the waterfront. The only industry is located in an area in the northeastern corner of the Village. The plan recommends special historic areas within the Village to protect historic structures via provisions in the zoning ordinance.

The recreation and conservation proposals include beach acquisitions on the oceanfront and an environmental preserve on the west end of the barrier beach. Preservation of the marshes which would also protect the groundwater reservoir is proposed. The use of clustering to achieve this is the primary recommendation. A bus shuttle service to the beach is indicated as a way of reducing traffic and diminishing the need for extensive parking facilities on the barrier beach.

The water and sewer recommendations call for control of wells below the ten foot contour line. This is to avoid salt water intrusion into the wells. A public water district to serve the entire Village is recommended. Sewers are proposed for the central portion of the Village along with a recharge system to replenish the ground water supply.

The solid waste recommendations call for regional cooperation with the Town of Southampton. There is a proposal for a packer unit within the Village that would transfer compacted solid waste to a Town-wide landfill site.

There are proposals for overlay districts for agricultural, tidal wetlands and tidal flood plains. The use of transfer of development rights and the planned unit approach are envisioned as ways to preserve agriculture and wetlands and to limit development within flood plain areas.

**COASTAL ZONE MANAGEMENT PROGRAM
WATER CAPABILITY CLASSIFICATION SYSTEM**

Prepared by

**Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787**

**Dr. Lee E. Koppelman
Project Director**

15 June 1977

Task 3.1

Contract Number D93967

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WATER CAPABILITY SYSTEM (Draft 4/25/77)

I. Introduction

Rational coastal zone planning requires a knowledge of how various human activities impact environmental resources. In addition, it requires an accurate picture or inventory of the types and distributions of environmental resources within the planning area that are likely to be impacted. Without this knowledge and information the consequences of specific planning proposals cannot be fully determined.

Cause-effect links between human uses (activities) and marine environmental resources have been fairly well identified.¹ However, precise quantitative expressions for these links have not yet been developed. Therefore, while the scientist or planner may be in a position to say that a given use will have a negative impact on a certain resource, he will seldom, if ever, be in a position to say how great that impact will be, or over what geographic area it will be felt, or to what extent secondary impacts will occur.

The inability to quantitatively express (i.e., to model) the interactions between human uses and marine environmental resources does not imply that scientific data on these interactions, even in their present rudimentary form, cannot be utilized in the planning process. What it does imply is that the use of these scientific data by planners must take into account the limitations described above, and must be based on determinations of what, in light of these knowledge gaps, constitutes prudent courses of action.

The Water Capability System, which integrates marine environmental science with coastal zone planning, is an outgrowth of earlier work conducted

¹ Nassau-Suffolk Regional Planning Board, Integration of Regional Land Use Planning and Coastal Zone Science, Hauppauge, N. Y., June 1976, pp 145-152

by the Nassau-Suffolk Regional Planning Board and others.² It is based on two marine environmental parameters, bathymetry (depth) and hydrography (tidal flushing), that are capable of quantification and for which data are available for the entire Nassau-Suffolk region. Application of the Water Capability System makes possible the identification and mapping of marine waters with similar characteristics and therefore, presumably, with potentially similar responses to human use impacts.

The resolution of the Water Capability System is still rather crude, but considerable refinement should be possible in the future. However, even in its present rudimentary form, the Water Capability System gives the planner a tool with which he may sharpen his perception of the coastal zone, and may therefore be more prudent in his recommendations.

II. System Parameters and Categories

A classification system for marine waters could theoretically be based on an infinite number of biological, physical, chemical, hydrographical, or geological parameters. However, to be useful, such a system would require detailed data on each of these parameters for each portion of marine water to be classified. A quick review of existing environmental inventories for coastal waters reveals that bathymetry (i.e., water depth, usually, measured at Mean Low Water) is the only parameter for which accurate information is available over a large geographic area. Most inventories of other parameters either do not have

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Nassau-Suffolk Regional Planning Board, *ibid.*; Nassau-Suffolk Regional Planning Board, The Status and Potential of the Marine Environment, Oceanographic Committee, Hauppauge, N. Y., December 1966; Roy Mann Associates, Inc., Recreation Boating Impact: Chesapeake and Chincoteague Bays, Part 1: Boating Capacity Planning System, Cambridge, Mass., November 1974

adequate resolution or spatial coverage (e.g., bottom sediments or vegetation), or they involve resources whose distributions are highly variable over time (e.g., fish or other motile biota).

Fortunately, the Nassau-Suffolk region can also make use of another parameter, Steady-state Pollution Susceptibility, which provides a rough quantification of tidal flushing action and which has previously been mapped for the entire region.³ Thus water bathymetry (depth) measured at Mean Low Water, and hydrography (tidal flushing) as calculated by the Steady-state Pollution Susceptibility model, serve as the basic parameters for the Water Capability System.

The possible values of water depth and Steady-state Pollution Susceptibility lie on a continuum. The definition of mappable categories requires that limits be placed on these values, and, ideally, such cutoff values would represent physical thresholds that can be shown to separate waters with different responses to external stimuli (e.g., pollution). Unfortunately, no such scientifically demonstrable thresholds exist, even for simple parameters such as depth and tidal flushing. However, limits along the continuum of values can be selected based on empirical evidence (i.e., real-world observations) so that reasonable categories can be defined. This is the approach taken in the development of the Water Capability System.

Water depth can have a significant effect on the likelihood that human uses will adversely impact marine environmental resources. For example, for a given bottom type and local biota, the effects of boating-induced turbulence or prop wash will increase as water depths decrease. In addition, the distribution of certain biological resources such as attached plants (benthic flora) is affected by water depth, due to decreasing sunlight penetration with increasing depth.

³ Weyl, P.K. The Pollution Susceptibility of the Marine Waters of Nassau and Suffolk Counties, New York, Marine Sciences Research Center, Stony Brook, N.Y., November 1974

The Water Capability System utilizes the 6 foot (1 fathom) and 12 foot (2 fathom) depths at Mean Low Water as limits in the definition of depth categories. The 6 foot depth is generally the lower limit at which direct damage of bottom organisms by propeller cutting will occur. Attached benthic plants will generally be found at depths less than 6 feet due to the limited penetration of sunlight in coastal waters. In addition, the 6 foot depth contour has been recommended in other planning studies as "a minimum precautionary depth for planning purposes".⁴ The 12 foot depth is approximately the lower limit of significant mixing or turbulence resulting from the operation of outboard motors.⁵ Therefore, the Water Capability System divides coastal tidal waters into three depth categories: waters equal to or greater than 12 feet deep at Mean Low Water; waters equal to or greater than 6 feet deep but less than 12 feet deep at Mean Low Water; and waters less than 6 feet deep at Mean Low Water. Depths at Mean Low Water are used since they represent average "worst case" conditions, on which to base prudent planning.

The other parameter used by the Water Capability System to categorize coastal waters is tidal flushing, which is quantified by utilizing the Steady-state Pollution Susceptibility model previously developed for the Nassau-Suffolk Regional Planning Board.⁶ The model is based on simple tidal prism and tidal excursion calculations. Steady-state Pollution Susceptibility values are utilized to divide tidal waters into three categories based on empirical observations about the relationship between model values and actual flushing actions. The determination of cutoff values utilized by the Water Capability System takes into consideration

⁴
Roy Mann Associates, Inc., op.cit., pg. 103

⁵
Roy Mann Associates, Inc., op. cit. pg. 103 citing U.S.E.P.A., Assessing Effects on Water Quality by Boating Activity, National Environmental Research Center, Cincinnati, Ohio, October 1974

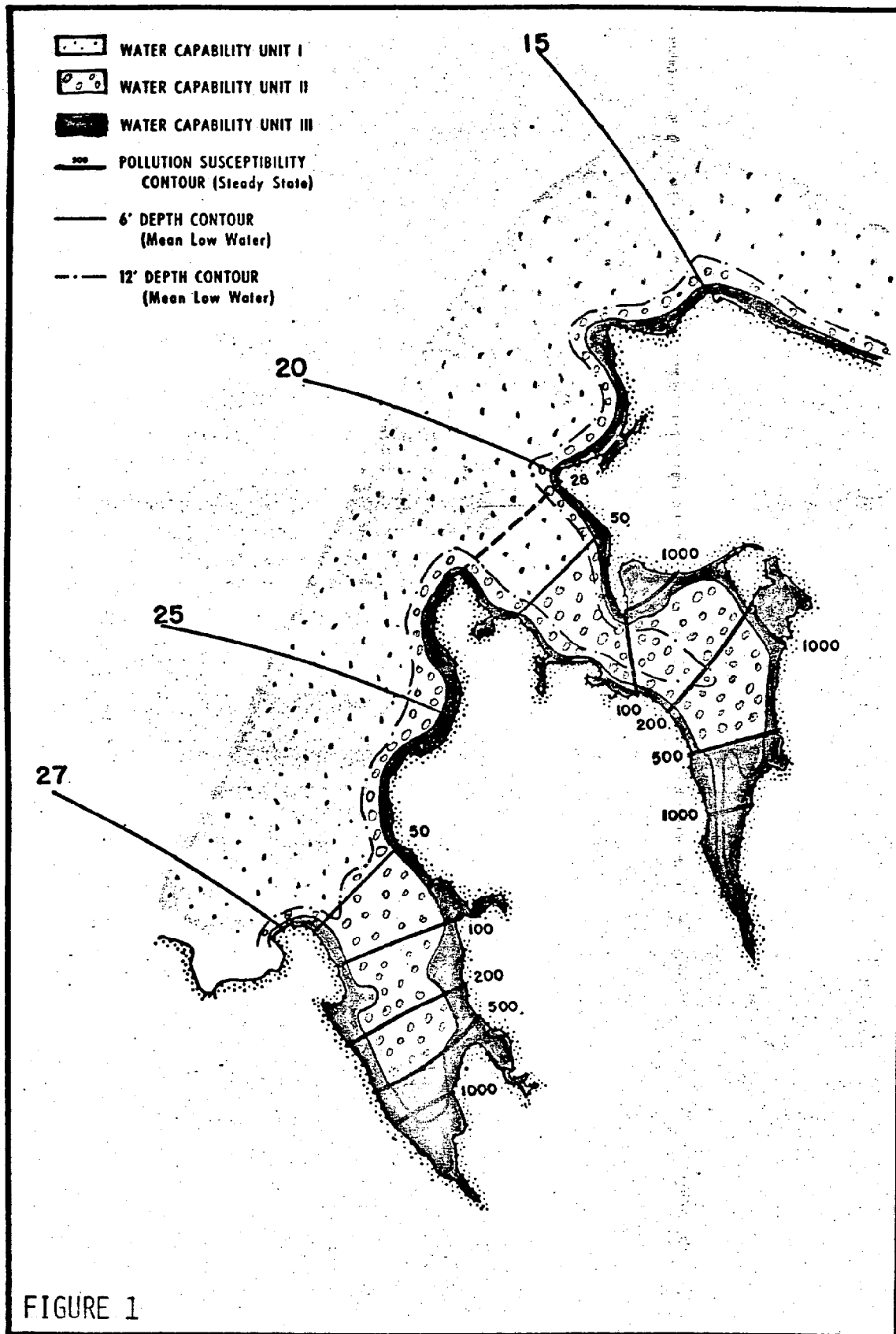
⁶
Nassau-Suffolk Regional Planning Board (1976), op. cit.; Weyl, op. cit.

the accuracy limitations of the Steady-state Pollution Susceptibility model, and is therefore based on order-of-magnitude differences. The three tidal flushing categories are defined as waters with Steady-state Pollution Susceptibility values less than 50; waters with Steady-state Pollution Susceptibility values equal to or greater than 50 but less than 500, and, waters with Steady State Pollution Susceptibility values equal to or greater than 500.

III. System Classification Units: Application and Interpretation

The three depth and three tidal flushing categories can be combined into 9 possible classifications. However, the mapping of nine water classifications presents a considerable number of technical problems. To avoid these problems, the Water Capability System condenses the nine possible classifications into three mapping classification "units." The exact interpretation of these units depends on the location of the water area in question. For example, along the open coastline Steady-state Pollution Susceptibility values are fairly uniform and usually less than 50. In this instance the depth parameter becomes the primary determinant for assigning Water Capability units (Figure 1). Within embayments the situation is more complex, and the Steady-state Pollution Susceptibility values assume greater importance, especially at the embayment heads where they become the determining factor (Figure 1). Nevertheless, depth and Steady-state Pollution Susceptibility value contours are included on maps of Water Capability even where these parameters are not crucial to the assignment of Water Capability units in order to provide ready access to all relevant information (Figure 1).

The definitions of the three Water Capability classification units can be summarized as follows: Water Capability Unit I - depths at Mean Low Water equal to or greater than 12 feet and Steady-state Pollution Susceptibility values less than 50; Water Capability Unit II - depths at Mean Low Water equal to



or greater than 6 feet and Steady-state Pollution Susceptibility values less than 500; and, Water Capability III - depths at Mean Low Water less than 6 feet or Steady-state Pollution Susceptibility values equal to or greater than 500.

These definitions can be summarized in the following table:

	<u>Depth at Mean Low Water (ft)</u>		<u>Steady-state Pollution Susceptibility Value</u>
Water Capability Unit I	≥ 12	and	< 50
Water Capability Unit II	≥ 6	and	< 500
Water Capability Unit III	< 6	or	≥ 500

Note that Unit I is a subset of Unit II (i.e., waters in Unit I also meet the definition of Unit II waters). Waters are always assigned the lower classification (Unit I when they meet the definition).

One other mapping convention involving the Water Capability System concerns the classification of fresh water ponds and lakes, and the non-tidal portions of streams. Clearly, the strict application of the Water Capability System to these waters is impossible since no Steady-state Pollution Susceptibility values can be calculated for them. However, for the purposes of mapping, the Coastal Zone Management study assigns these non-tidal waters to Water Capability Unit III. This is a reasonable convention since the kinds of management techniques that would be applied to poorly flushed, shallow tidal water would most likely also be applied to fresh waters with no tidal flushing at all.

IV. System Utility

The Water Capability System provides the planner with a tool with which to develop a macroscopic picture of the relative vulnerabilities of marine waters to negative impacts from human uses. Such an overview has a number of possible applications in the coastal zone planning process.

Maps of Water Capability provide a quick means of identifying potential "trouble spots" within a region's coastal marine waters. Along the open coast, Water Capability maps indicate shoal areas that may present navigational problems. For example, the map of Smithtown Bay (Figure 2) indicates extensive shoals at the entrance to Stony Brook Harbor and at the mouth of the Nissequogue River, and, indeed, these are locations where considerable navigational problems exist. In contrast, the map of Port Jefferson and Mt. Sinai Harbors (Figure 2) does not show large shoals outside the inlets and, not surprisingly, these areas have less severe navigational problems than those found in Smithtown Bay. Within embayments, the shallow poorly-flushed (i.e., Unit III) areas are most susceptible to water quality deterioration resulting from urbanization of surrounding watersheds, and it is these areas that can be expected to be degraded and closed to swimming or shellfishing first. In this regard, it can be seen from regional maps of Water Capability for Nassau and Suffolk Counties (Figure 3) that, in general, the south shore embayments are much more vulnerable to the effects of shoreline urbanization than are the north shore or east end embayments.

The Water Capability System also provides an objective means for delimiting water areas whose protection may require special management techniques. Such areas might include coastal shoals that are important for shellfishing and waterfowl feeding, or shallow poorly-flushed portions of embayments that tend to be biologically productive but also highly sensitive to human impacts. Special management techniques might include regulation of boat speed, horsepower, or time (hours or seasons) of operation; regulation of seasons for dredging and spoil operations; or prohibitions of specified activities such as waterskiing or the discharge of marine sanitation devices.

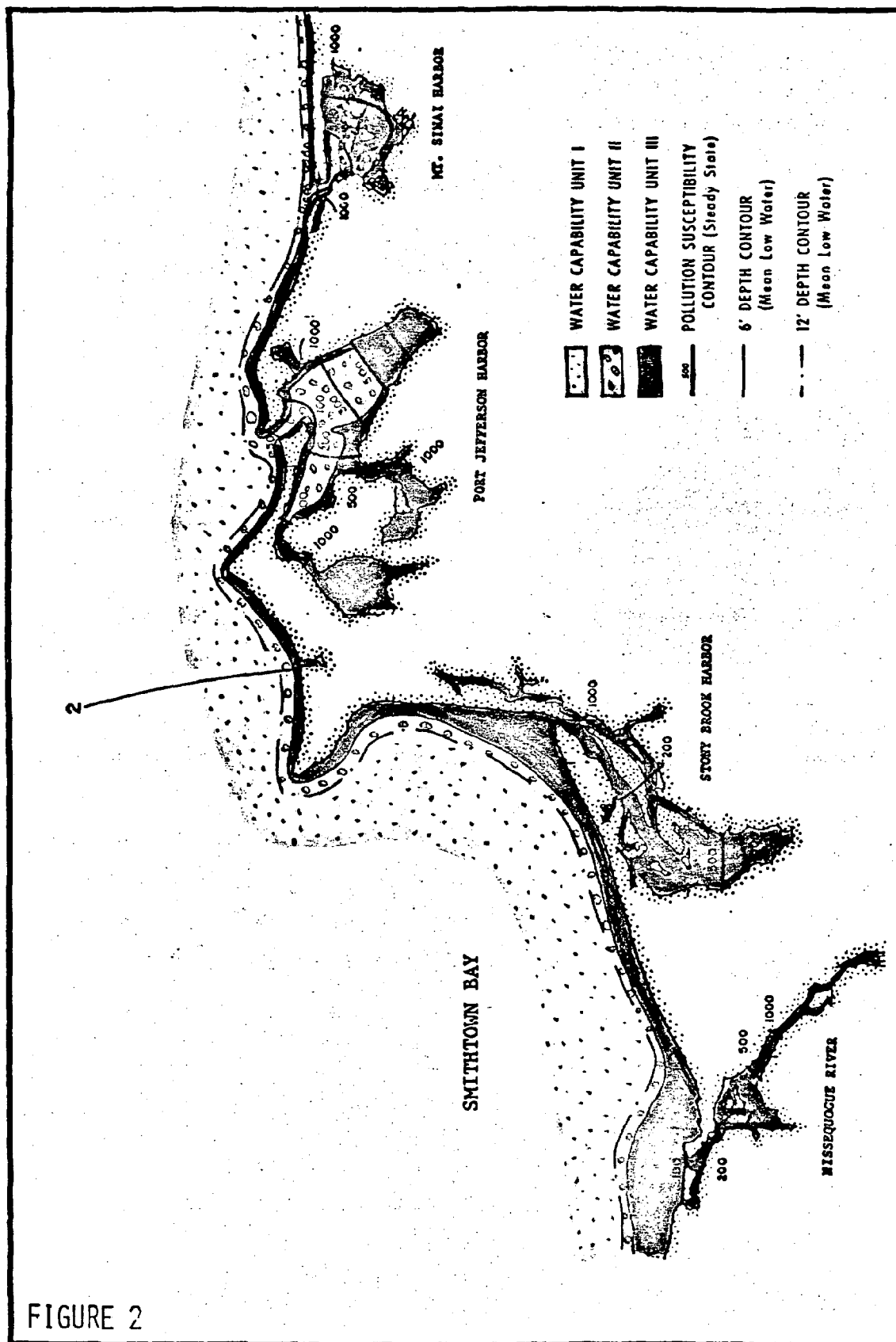


FIGURE 2

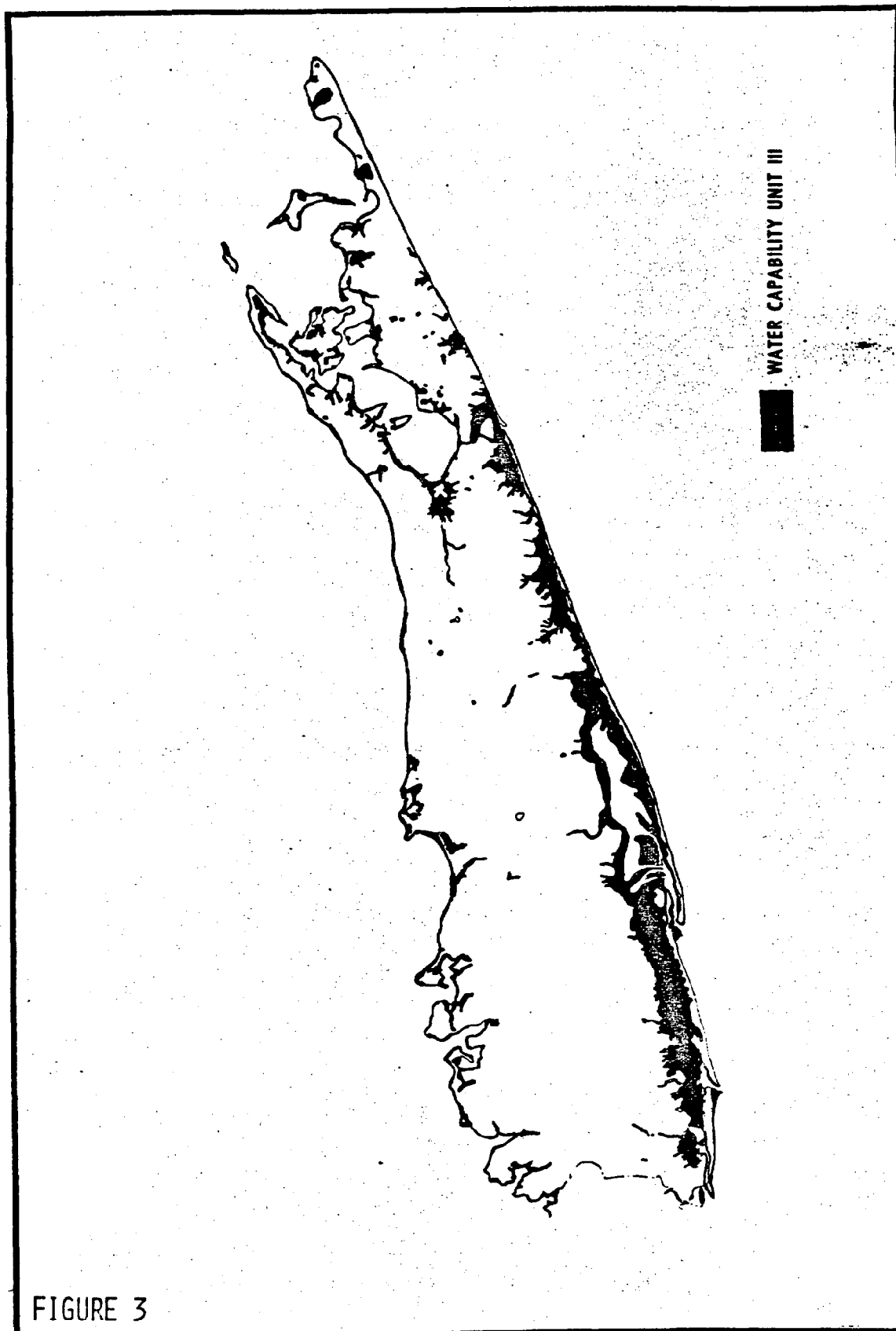


FIGURE 3

V. System Transferability and Methodological Extensions

The Water Capability System, as presently constituted, can be applied to any area for which water depth and tidal flushing data (Steady-state Pollution Susceptibility values) are available. Water depth information for most tidal waters is available from the National Ocean Survey (U. S. Department of Commerce) in the form of nautical charts. The Steady-state Pollution Susceptibility model can be applied directly to any waters with semi-diurnal tides, and can also be applied, after slight modification, to areas with complex tidal regimes or significant riverflows.⁷

As noted earlier, the complexity of the Water Capability System (i.e., the number of parameters) is presently limited by the deficiencies of existing marine environmental inventories. Clearly, it would be desirable to include in the classification scheme such parameters as bottom sediment type (e.g., sand, mud, etc.) or biological resources (e.g., attached flora, shellfish, finfish spawning areas, etc.). However, it should be recognized that an increased number of parameters would require greater scientific knowledge about their interactions in order to determine cutoff values for categories. In addition, there would be greater problems in establishing and mapping "boiled down" relative classification (ranking) units.

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Nassau-Suffolk Regional Planning Board, 1976, op. cit. pp. 49 - 62.

COASTAL ZONE MANAGEMENT PROGRAM
EVALUATION OF LOCAL WATER USE PLANS

Prepared by

Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787

Dr. Lee E. Koppelman
Project Director

15 June 1977

Task 3.1

Contract Number D93967

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Evaluation of Existing Local Water Use Plans
for the Nassau-Suffolk Region
(Draft 6/1/77)

The evaluation of local water use plans for the Nassau-Suffolk Region began in July with the formation of a Dredging Advisory Committee to the Regional Marine Resources Council. Regional Marine Resource Council members with expertise in dredging, spoil disposal, and boating matters were invited to participate in the updating and elaboration of existing Council guidelines on dredging and spoil disposal, and to develop a water capability system, which would be the tools with which to evaluate existing local plans and to develop new plans (see attachment A). The initial members of the Dredging Advisory Committee (DAC) represented Federal, State, and local governmental agencies, and the local university (see attachment B).

During the months of October, November, and December of 1976, each of the towns and villages within the Nassau-Suffolk Region with waterfront property was contacted and invited to submit dredging information and related shoreline development plans to the DAC, and to participate at DAC meetings (see attachments C & D). As a result, a number of municipalities took part in the DAC meetings during January and February of 1977 (see attachment E). The efforts of the DAC produced the Water Capability System (see Water Capability memo) and updated and expanded MRC Navigation Channel Dredging and Spoil Disposal Guidelines (see attachment F). These became basic tools for the evaluation of local water use plans.

Dredging and related water use information was provided by a number of local municipalities. However, no official "water use plans" were identified or submitted. The municipalities that submitted dredging and water use information were: Town of Babylon, Brookhaven, Hempstead, North Hempstead, Oyster Bay, Shelter Island, Smithtown, and Southampton; and Village of Amityville, Babylon, Bayville, and Brightwaters. This information was evaluated as follows:

1. Town of Babylon: Environmental Control Commissioner Ritzert submitted a listing of canals requiring maintenance dredging (see attachment G). No channel dimensions or spoil locations were indicated. Preliminary CZM analysis indicates that a maximum dredging depth of 6' at Mean Low Water (MLW) should be recommended to the Town for these areas.
2. Town of Brookhaven: Environmental Protection Director Proios submitted a listing of future maintenance projects on the Town's north and south shores (see attachment H). While the Town has no position on the Port Jefferson project, preliminary CZM analysis indicates that an offshore oil terminal should be constructed in lieu of channel expansion from 26' to 40' at MLW. Maintenance dredging at some depth less than 26' should still be planned for, to serve sand and gravel facilities, and the Bridgeport ferry. Preliminary CZM analysis concurs with the Town's intention to preserve the southern portion of Mt. Sinai Harbor for its unique wildlife and wetland values, while maintaining the northern portion for recreational boating facilities. No channel dimensions or spoil disposal locations for south shore channels were indicated in the Director's letter. However, the NSRPB will be addressing these items in its navigation channel dredging plan.
3. Town of Hempstead: Conservation and Waterways Commissioner Udell submitted a detailed map indicating those channels that his department intended to maintain to a depth of 6' and those that would be phased out. This map indicated disposal areas (deep holes) that will be utilized for projects authorized under an existing U.S. Army Corps of Engineers permit. Preliminary CZM analysis generally concurs with the Department's plans for channel maintenance and spoil disposal. However, the NSRPB has identified the need for the maintenance of deep (12'-15') channels

to LILCO and oil terminal facilities in Island Park-Oceanside, along the north side of the barrier island from East Rockaway Inlet to Jones Inlet (Reynolds Channel), and from Jones Inlet to commercial fisheries facilities on Woodcleft Canal and Freeport Creek. Therefore, preliminary CZM analysis indicates the need to determine responsibility for these major channels, as well as to identify upland spoil disposal sites and to develop a management capability for polluted spoils.

4. Town of North Hempstead: Environmental Control Specialist Quinn submitted a letter and map indicating the status of major navigation channels within the Town (see attachment I). No channel dimensions or spoil sites were listed. Preliminary CZM analysis indicates that oil terminal facilities at the heads of Manhasset Bay, Hempstead Bay, and on Sheets Creek and Glen Cove Creek should be phased out and replaced with a regional offshore terminal at the mouth of Hempstead Harbor. The Port Washington sand pits could be an ideal area for dredge spoil management.
5. Town of Oyster Bay: Environmental Control Superintendent VanderVeer submitted a map showing a 1967 - 68 proposal for a channel system in South Oyster Bay. The channels were 300' wide at 20' deep at MLW, and included a large basin for waterskiing. This proposal is presently inactive, and was designed, in part, in response to the need for construction material for the Cedar Creek sewage treatment plant, which has subsequently been completed. Preliminary CZM analyses and guidelines indicate that this proposal is totally unnecessary and undesirable in light of present conditions and needs. A more suitable system of navigation channels will be recommended under CZM.
6. Town of Shelter Island: Supervisor Bliss submitted a listing of creeks and inlets for which maintenance dredging was desired (see attachment J).

More information will have to be collected before channel dimensions and spoil sites can be determined under CZM.

7. Town of Smithtown: Environmental Aide Resler submitted an unofficial map indicating those channels that would be maintained, deepened, or left in their natural state, and spoil sites for these projects. Preliminary CZM analysis concurs with Town plan, as indicated on the map, that the northern portions of the Nissequogue River and Stony Brook Harbor should be maintained for recreational boating facilities, while the southern portions should be left in their natural state, and that spoil should be used for beach nourishment on Smithtown Bay beaches. Channel dimensions will be specified by the CZM navigation channel plan.
8. Town of Southampton: Environmental Board Chairman Foster submitted a letter indicating that no shoreline development projects were contemplated for the Town (see attachment K). The Town Board of Trustees were contacted by letter but did not supply any additional information.
9. Village of Amityville: Village environmental consultant Brown submitted a letter and map indicating the projected dredging needs within the Village and the related dredging policy (see attachment L). The depth design of the channels, and the policy statements, are generally consistent with preliminary CZM analyses and guidelines.
10. Village of Babylon: Village Trustee Morris submitted a letter and map indicating municipal boat areas where dredging may be required (see attachment M). No depths or spoil areas were indicated on the map.
11. Village of Bayville: Village Clerk-Treasurer DeClue submitted a letter and map explaining existing conditions and desired dimensions for the Village's lone navigation channel (see attachment N). Preliminary CZM analysis indicates that the proper depth for the channel, which is located in the poorly flushed waters of Mill Neck Creek, should be

about 5' at MLW, rather than the 6'-8' requested by the Village. Mr. DeClue also indicated, by phone, a desire to use the spoil to arrest shoreline erosion along the north side of Mill Neck Creek, which is consistent with CZM recommendations for constructive uses of dredge spoil.

12. Village of Brightwaters: Village Clerk Garbedian submitted a letter indicating that the Village had no plans involving dredging or other water uses (see attachment 0).



Regional Marine Resources Council

A COMMITTEE OF THE NASSAU-SUFFOLK REGIONAL PLANNING BOARD

E. C. STEPHAN
CHAIRMAN

LEE E. KOPPELMAN
EXECUTIVE DIRECTOR

CLARKE WILLIAMS
RESEARCH ADMINISTRATOR

Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) ~~724-2500~~ 979-2935

July 1, 1976

Dear

The Regional Marine Resources Council will be assisting the Nassau-Suffolk Regional Planning Board in the development of a coastal zone management plan for the Nassau-Suffolk region pursuant to the rules and regulations of the Coastal Zone Management Act of 1972. Specifically, the Council will be devoting most of its activity during the remaining months of 1976 to the preparation of a channel dredging plan for Nassau-Suffolk marine waters. Because of your interest in and activities concerning the marine environment, we would like to invite you to participate in a committee which will be formed to accomplish this important task.

The initial work of the Council will be to develop a set of criteria or policy guidelines for determining where and to what extent dredging should occur in Long Island coastal waters. These criteria can be based on such factors as dredging history, traditional use, sediment type, boating demands, tidal flushing action, proximity to shellfish beds and other natural resources, etc. Once the criteria are defined, they will be applied on a bay-by-bay basis to develop recommendations for a channel plan.

The channel plan will constitute a significant mechanism for the regulation of land and water uses in Long Island's coastal zone. The design of such a plan has great potential for assuring the conservation of bay bottom and shoreline resources. Appropriate Federal and State agency adoption of the Nassau-Suffolk coastal zone management plan, part of which will be devoted to navigational channels, should result in speedier individual project approvals and the avoidance of undue project controversy and delays.

You will be receiving additional information regarding Council meetings on this topic. We look forward to your help and cooperation in the months that follow.

Sincerely,

Lee E. Koppelman
Executive Director

LEK:er

- * Mr. Carl Eisenschneid, P.E.
Principal Civil Engineer
Suffolk County Dept. of Public Works
Yaphank Avenue
Yaphank, New York 11980 Phone: 924-2351

- * Mr. James Bagg
Senior Environmental Planner
Council on Environmental Quality
County of Suffolk
H. Lee Dennison Building
Veterans Memorial Highway
Hauppauge, New York 11787 Phone: 979-2536

- * Mr. Harold Udell
Director
Dept. of Conservation & Waterways
Town of Hempstead
One Parkside Drive
Point Lookout, New York 11569 Phone: 431-9200

- * Mr. Ken Ulreich
Chief, Project Management Section
Navigation Branch
U.S. Army Corps of Engineers, NY Dist.
26 Federal Plaza
New York, N. Y. 10007 Phone: 212-264-9031

- * Mr. Peter Sanko
Sea Grant Advisory Service
SUNY-Rm. 121, Bio. Bldg. H
Stony Brook, New York 11794 Phone: 246-7777

- * Mr. Francis Hyland
Chief Engineer
L.I. State Park & Recreation Comm.
Belmont State Park
Babylon, New York 11702 Phone: 669-1000

- * Dr. J. R. Schubel
Director
Marine Sciences Research Center
Surge J, SUNY
Stony Brook, New York 11794 Phone: 246-6543

- * Mr. Anthony Taormina
Director
Division of Marine & Coastal Resources
NYS Dept. of Environmental
Conservation
SUNY Bldg. 40
Stony Brook, N.Y. 11794 Phone: 751-7900



Nassau/Suffolk Regional Planning Board



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Leonard W. Hall
H. Lee Dennison

H. Lee Dennison Executive Office Building
Veterans Memorial Highway Hauppauge, L.I., N.Y. 11787
Area Code (516) 724-1919

October 25, 1976

The Nassau-Suffolk Regional Planning Board is presently engaged in Coastal Zone Management Planning for all of Long Island. Part of this effort will involve the identification of coastal dredging projects that may involve County, State, or Federal permits and/or funds, so that future processing of such projects may be expedited.

Your town is invited to participate in this process by presenting dredging information and related shoreline development plans to the Board's Dredging Advisory Committee (DAC) of the Regional Marine Resources Council. The next DAC meeting will be held on November 4 (see attachment). Information on DAC meetings may be obtained by calling Mr. Sy Robbins at 979-2935. Please pass this information to the director of your planning and/or environmental department.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lee E. Koppelman".

Lee E. Koppelman
Executive Director

LEK:er
Enc.



Nassau-Suffolk Regional Planning Board



Harold V. Gleason
Chairman

Seth A. Hubbard, Esq.
Vice Chairman

Vincent R. Balletta, Jr.

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Leonard W. Hall
H. Lee Dennison

H. Lee Dennison Executive Office Building
Veterans Memorial Highway Hauppauge, L.I., N.Y. 11787

Area Code (516) 724-1919

December 27, 1976

The Nassau-Suffolk Regional Planning Board is presently engaged in Coastal Zone Management Planning for all of Long Island. Part of this effort will involve the identification of coastal dredging projects that may involve County, State, or Federal permits and/or funds, so that future processing of such projects may be expedited.

Your village is invited to participate in this process by presenting dredging information and related shoreline development plans to the Board's Dredging Advisory Committee (DAC) of the Regional Marine Resources Council. The next DAC meeting will be held on Thursday, January 6 at 2:00 p.m. in the 12th floor conference room in the H. Lee Dennison Building, Veterans Memorial Highway, Hauppauge, N.Y. Information on DAC meetings may be obtained by calling Mr. Sy Robbins at 979-2535. Please pass this information to Mayor _____ and the members of the Village Board.

Sincerely,

Lee E. Koppelman
Executive Director

LEK:dat

Dredging Advisory Committee of the Regional Marine Resources Council
Record of First Meeting 19 August 1976

Members

Present: James Bagg, Carl Eisenschmeid, Peter Sanko, J.R. Schubel, Dave Fallon representing Tony Taormina, Harold Udell, Ken Ulreich representing John Zammit

Absent: Francis Hyland

Staff: Lee E. Koppelman, DeWitt Davies, Sy Robbins, Israel Wilenitz, Clarke Williams (Chairman)

Guests: Pio Massetti (SCDPW)

I. The following items were distributed to the members:

1. NSRPB Year I CZM report entitled "Coastal Zone Planning Elements: Goals and Boundaries" Jan. 1976.
2. NSRPB Year II CZM detailed work statement.
3. U.S. Dept. of Commerce, Office of Coastal Zone Management "Threshold Papers" #1 - #7: #1 - Boundaries; #2 - Land and Water Uses; #3 - Geographic Areas of Particular Concern; #4 - Public and Governmental Involvement; #5 - State-Federal Interaction and National Interests; #6 - Organization; #7 - Authorities.
4. MRC guidelines on dredging and dredge spoil disposal.
5. Staff outline, dated August 19, 1976 entitled "Development of a Channel Dredging Plan for the Nassau-Suffolk Coastal Zone".
6. Bibliography entitled "Environmental Effects of Dredging; Spoil Disposal; Marinas" submitted by Peter Sanko.

II. The CZM Act, the NSRPB Year I CZM program, and the Year II work statement were reviewed by DeWitt Davies.

III. Dr. Williams reviewed the dredging plan development outline.

IV. Harold Udell discussed Hempstead Town's existing dredging plan which designates historical high use channels which will be maintained at 6' below MLW. A 10-year Army Corps of Engineers permit has been obtained which also designates spoil sites. Mr. Udell indicated that he would supply the committee with maps and other material from the plan.

- V. Carl Eisenschmeid discussed Suffolk County DPW policy which is to maintain pre-existing channels. SC has no overall plan but does dredging for the Towns which react on an ad hoc basis to particular dredging problems. A map of channels will be given to the committee. Spoil disposal problems in SC are different than those in Hempstead because hydraulic dredging, rather than bucket/hopper dredging, is performed.
- VI. Mr. Ulreich indicated that the Corps could readily produce a listing of L.I. projects, and Dr. Schubel added that the Marine Sciences Research Center has already compiled a list of Corps projects for the North Shore.
- VII. Dave Fallon stated that NYSDEC could supply information on biological criteria in relation to dredging.
- VIII. Dr. Williams explained that the dredging plan would indicate existing (including natural) and proposed channels which should be maintained in the future and that the existence of such a plan should expedite the processing of permits and improve public acceptance.
- IX. The next Dredging Advisory Committee meeting will be held Thursday, September 9, 1976 at 2:00 p.m. in the 12th Floor Conference Room at the H. Lee Dennison Building in Hauppauge. The staff will send out to the DAC members draft dredging and water capability criteria prior to the meeting. Representatives from the Towns of North Hempstead and Oyster Bay will be sought.



Regional Marine Resources Council

A COMMITTEE OF THE NASSAU-SUFFOLK REGIONAL PLANNING BOARD



E. C. STEPHAN
CHAIRMAN

LEE E. KOPPELMAN
EXECUTIVE DIRECTOR

CLARKE WILLIAMS
RESEARCH ADMINISTRATOR

Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) 724-2500

Dredging Advisory Committee (DAC)

Notice of Meeting

There will be a meeting of the Dredging Advisory Committee on Thursday, 9 September 1976 at 2:00 p.m. in the 12th floor conference room, H. Lee Dennison Office Building, Veterans Memorial Highway, Hauppauge, N.Y.

The meeting will be devoted to:

1. review of dredging plans, projects and maps by DAC agency representatives; and
2. comment on the preliminary Water Capability Unit Classification scheme prepared by the staff.

Attached to this notice find: a. record of the DAC meeting held on 19 August 1976; b. outline of the approach to be used in establishing a channel dredging plan for Nassau-Suffolk coastal waters; and c. draft Water Capability Classification System with supporting information (which pertains to Step 2 of the outline referred to in b. above).

Please contact the Marine Resources Council staff if you will not be able to attend this meeting.

cc: Carl Eisenschmeid
James Bagg
Harold Udell
John Zammit
Ken Ulreich
Peter Sanko
Francis Hyland
Anthony Taormina
J.R. Schubel

Clarke Williams
Research Administrator

Dredging Advisory Committee of the Regional Marine Resources Council
Record of Second Meeting 9 September, 1976

Members

Present: James Bagg, Peter Sanko, J.R. Schubel, Tony Taormina, Gino Aiello representing Harold Udell, Ken Ulreich, John VanderVeer.

Absent: Carl Eisenschmeid, Francis Hyland

Staff: DeWitt Davies, Sy Robbins, Israel Wilenitz, Clarke Williams (Chairman)

- I. Ken Ulreich presented the DAC with a book of project maps for Long Island, dated 30 June 1975, compiled by the New York District. A large composite project map was also presented. Authorized projects are done when money is available and are economically justifiable.
- II. The relationship between the final Coastal Zone Management Plan (with its component dredging plan) and the requirements for EISs under NEPA was discussed. The general feeling was that EISs would still be required after a final CZM plan is adopted.
- III. Tony Taormina described a Conservation Department dredging plan for South Oyster Bay done in 1967-1968, which he will make available to the DAC.
- IV. John VanderVeer described the dredging projects proposed for the Town of Oyster Bay. These include, on the north shore, Tappan Beach in Hempstead Harbor, and Whites Creek in Oyster Bay. In South Oyster Bay, the dredging of 26 canal mouths is contracted out (5-6 per year). Spoil is dumped on neighboring beaches.
- V. Ann Williams of the Marine Sciences Research Center at Stony Brook has compiled from Army Corps of Engineers files, data on dredging projects for Long Island's North Shore, and will present these data at the next meeting (23 Sept. 1976). Ken Ulreich will try to compile similar data for the South Shore back to 1950.
- VI. Tony Taormina stressed that dredge spoil disposal is a great problem, and that long term dump sites should be identified. He also noted that Harry Knoch of NYSDEC had completed a study of marsh erosion in Hempstead which found boat wake to be a contributing factor.
- VII. A revised Water Capability System was discussed (see attached). The system might be used to delimit areas where the discharge of marine sanitation devices would be prohibited.
- VIII. Maintenance of designated channels was discussed. Sy Robbins noted that, in general, dredging should be commenced only after surveys show that navigational problems cannot be solved by relocating or adding marker buoys.
- IX. The economics of channel design, and the types of dredging equipment available on Long Island was reviewed.



Regional Marine Resources Council

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CHAIRMAN

LEE E. KOPPELMAN
EXECUTIVE DIRECTOR

CLARKE WILLIAMS
RESEARCH ADMINISTRATOR

Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) 724-2500

Dredging Advisory Committee (DAC)

Notice of Meeting

There will be a meeting of the Dredging Advisory Committee on Thursday, 23 September 1976 at 2:30 p.m. in the 12th floor conference room, H. Lee Dennison Office Building, Veterans Memorial Highway, Hauppauge, N.Y.

The meeting will be devoted to:

1. continuing the review of dredging plans, projects, and maps by DAC agency representatives that was initiated at the 9 September meeting;
2. report by Ms. Anne Williams on information and data collected by the Marine Sciences Research Center covering dredging projects on the Island's north shore;
3. review and comment on the Water Capability Classification System distributed at the 9 September meeting; and
4. progress report by Ken Ulreich on the assembly of data on south shore dredging projects.

Attached find record of the DAC meeting held on 9 September 1976, and also copy of the Water Capability Classification System.

Please contact the Marine Resources Council staff if you will not be able to attend this meeting.

cc: Carl Eisenschmeid
James Bagg
Harold Udell
John Zammit
Ken Ulreich
Peter Sanko
Francis Hyland
Anthony Taormina
J. R. Schubel

Clarke Williams
Research Administrator

Dredging Advisory Committee of the Regional Marine Resources Council
Record of Third Meeting 23 September 1976

Members

Present: James Bagg, Jim Hunter representing Carl Eisenschmied, Peter Sanko, J. R. Schubel, John Renkavinsky representing Tony Taormina, Harold Udell, John VanderVeer

Absent: Francis Hyland, Ken Ulreich

Staff: DeWitt Davies, Sy Robbins, Israel Wilenitz, Clarke Williams (chairman)

Guests: Gino Aiello (Town of Hempstead), William Warner (Town of Oyster Bay), Anne Williams (Marine Sciences Research Center)

I. Bill Warner, Town of Oyster Bay Supervisor of Conservation and Waterways, presented a Town of Oyster Bay-N.Y.S. Conservation Department plan for South Oyster Bay developed in 1966 to deepen channels so as to 1) bring gamefish to northern eelgrass beds, 2) provide a triangular racing course for keeled sailboats, and 3) divert traffic from the State Boat Channel. Later studies by Leonard Wegman Co. and Lockwood, Kessler and Bartlett, Inc. recommended similar channels. The plan was never executed because of economic reasons.

II. Gino Aiello and Harold Udell reviewed the status of channels in Hempstead Bay, Middle Bay, and East Bay. A map was displayed showing Federal and State maintained channels, Town maintained channels, and those existing channels which will be allowed to fill in. (Copies of this map will be made available to the DAC soon). Private canals could be dredged by the Town where improvement districts are formed. Maximum canal depth is 10 ft. at MLW.

III. Anne Williams presented a summary of Federal dredging projects bordering on Long Island Sound including the dates last dredged and the disposal site used. This information was gathered as part of a Sea Grant project to develop a regional spoil disposal plan for Long Island Sound. Most of the dredging is done in Connecticut. Copies of the summary are available to the DAC from the staff.

IV. Sy Robbins led a discussion of the draft Water Capability Classification System mailed to the DAC membership with the minutes of the 9 September 1976 meeting. Discussion focused on the use of the 12 ft. contour as the limit of the littoral zone. A sample map of Water Capabilities will be prepared for the next meeting.

V. John Renkavinsky handed out copies of a NYSDEC report by Tony Taormina entitled "Total Management for Resource Values of Long Island's Tidal Wetlands".



Regional Marine Resources Council

A COMMITTEE OF THE NASSAU-SUFFOLK REGIONAL PLANNING BOARD



E. C. STEPHAN
CHAIRMAN

LEE E. KOPPELMAN
EXECUTIVE DIRECTOR

CLARKE WILLIAMS
RESEARCH ADMINISTRATOR

Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) 724-2500

Dredging Advisory Committee (DAC)

Notice of Meeting

There will be a meeting of the Dredging Advisory Committee on Thursday,
7 October 1976 at 2:00 p.m. in the 12th floor conference room, H. Lee Dennison
Office Building, Veterans Memorial Highway, Hauppauge, N.Y.

The meeting will be devoted to:

1. Review by Ken Ulreich of Army Corps of Engineers projects (and their histories) for Nassau-Suffolk.
2. Review by Carl Eisenschmeid of Suffolk County Department of Public Works projects.
3. Discussion of sample water capability map prepared by Sy Robbins.

Please contact the MRC staff if you will not be able to attend this meeting.

cc: Carl Eisenschmeid

James Bagg
Harold Udell
John Zammit
Ken Ulreich
Peter Sanko
Francis Hyland
Anthony Taormina
J.R. Schubel
John VanderVeer

Clarke Williams
Research Administrator

Dredging Advisory Committee of the Regional Marine Resources Council
Record of Fourth Meeting 7 October 1976

Members

Present: Carl Eisenschmeid, Peter Sanko, Anne Williams representing J. R. Schubel, Tony Taormina, Gino Aiello representing Harold Udell, Ken Ulreich, William Warner representing John VanderVeer.

Absent: James Bagg, Francis Hyland

Staff: DeWitt Davies, Sy Robbins, Israel Wilenitz, Clarke Williams (Chairman)

Guests: Jim Hunter (SCDPW), Malcolm Hair (Town of Islip), David Fallon (NYSDEC)

I. Ken Ulreich indicated that Corps material would be ready for the next DAC meeting, and that an EIS for the intra-coastal waterway, dated December 1975, will be available.

II. Carl Eisenschmeid stated that SCDPW had performed no new dredging since 1972 in compliance with a CEQ resolution, although requests for new work have been received from the towns. Article 8 of the County Charter gives DPW the responsibility for maintaining waterways under County jurisdiction. DPW does not maintain creeks and canals, which are the responsibility of Towns or private associations.

III. Malcolm Hair explained that Islip has no formal dredging plan. Each year complaints are examined and field checked, and a list is submitted to DPW. Small projects are done by the Town. No new channels are planned. In the last 8 years 5,000 acres of bay bottom have been sampled for shellfish, bottom organisms, and sediment type (sand or silt). More information is needed on the distribution of eelgrass beds (which are usually found in less than 4 feet of water).

IV. Sy Robbins presented a map of Nassau-Suffolk showing the three Water Capability units. Resolution was best in north shore harbors. South shore bays were classified primarily as high impact susceptibility areas due to shallow depth and high Pollution Susceptibilities. The use of Water Capability as a planning tool is still in the development stage. Tony Taormina stressed that water capability should be used to vulnerability, but that the priority of uses for bay areas should also be based on living resources,



Regional Marine Resources Council

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EXECUTIVE DIRECTOR

CLARKE WILLIAMS
RESEARCH ADMINISTRATOR

Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) 724-2500

Dredging Advisory Committee (DAC)

Notice of Meeting

There will be a meeting of the Dredging Advisory Committee on Thursday, 4 November 1976 at 2:00 p.m. in the 12th Floor conference room, H. Lee Dennison Office Building, Veterans Memorial Highway, Hauppauge, N.Y.

The meeting will be devoted to a discussion of the problems of dredge spoil disposal and the formulation of guidelines for selecting spoil sites. Mr. Peter Puglese of the U.S. Army Corps of Engineers will participate in the discussion.

Please contact the staff if you will not be able to attend.

Clarke Williams
Research Administrator

cc: Carl Eisenschmeid
James Bagg
Harold Udell
John Zammit
Ken Ulreich
George Proios
Peter Sanko
Francis Hyland
Anthony Taormina
J. R. Schubel
John VanderVeer
Malcolm Hair

Dredging Advisory Committee of the Regional Marine Resources Council
Record of Fifth Meeting 4 November 1976

Members

Present: Jim Bagg, Jeff Vaughan representing Carl Eisenschmeid, Malcom Hair, Steven Resler (Town of Smithtown Planning/Conservation), J. R. Schubel, Dave Fallon representing Tony Taormina, William Warner representing John VanderVeer

Absent: Francis Hyland, George Proios, Peter Sanko, Harold Udell, Ken Ulreich

Staff: DeWitt Davies, Sy Robbins, Israel Wilenitz, Clarke Williams (Chairman)

Guests: Peter J. Puglese (Corps of Engineers, Navigation Branch), Robert Will (Corps of Engineers, Environmental Branch)

I. Peter Puglese and Robert Will discussed the Army Corp's procedure for evaluating dredging projects. For Corps projects, a "condition survey" is made to determine the need for the project - the depth of channels, the location of shoals. Sediment cores are analyzed for the presence of shellfish, grain size, total organic carbon, and, if fine material is present, an elutriate (shaker) test is performed. Predominantly coarse material (greater than 1/16 mm in diameter) is assumed to be unpolluted and can be used as fill, placed on a beach at the MHW line, or dumped in open water, as can fine sediments found unpolluted by the shaker test (less than 1 1/2 times the concentration in dump site waters). "Polluted" sediments must be disposed of in upland or confined areas, although special dump sites in the N.Y. Bight can still be used if no economically feasible alternative exists. The dredging history of a project area is considered in selecting disposal areas.

II. The problem of removing shellfish from project areas was discussed. No survey methods or density standards requiring transplantation presently exist. The Corps notifies NYSDEC (as a courtesy) and sometimes local shellfish interest (e.g., two years ago in connection with the intracoastal waterway) if shellfish are present. Malcolm Hair pointed out that the average density of clams in open water (approx. 60 bushels/acre) would require a hydraulic dredge for economic removal for transportation, and that this would require NYSDEC approval.

III. Malcolm Hair described dredging operations in Islip Town. Sediment analyses are not performed for private dredgings. For confined disposal the Town uses a fine black mesh material to retain fines and allow drainage of leachate. Dave Fallon confirmed that sediment analyses are not required on small projects. Deep holes might be used for disposal of polluted spoil if covered over with clean sand after dumping.

- IV. Dr. Schubel stated that new Corps regs on spoil disposal will be out in about 8 months which may require test dumps with follow-up monitoring. Maryland and Florida have requirements for turbidity screens during dredging but these would not be needed on L.I. except where shellfish beds might be affected.



Regional Marine Resources Council

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CLARKE WILLIAMS
RESEARCH ADMINISTRATOR

Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) 979-2935

Dredging Advisory Committee (DAC)

Notice of Meeting

There will be a meeting of the Dredging Advisory Committee on Thursday,
9 December 1976 at 2:00 p.m. in the 12th floor Conference Room, H. Lee
Dennison Office Building, Veterans Memorial Highway, Hauppauge, N.Y.

The meeting will be devoted to:

1. continued discussion of spoil disposal criteria;
2. review of preliminary dredging guidelines; and
3. presentation of preliminary dredging plans for the south shore of
L.I.

Clarke Williams
Research Administrator

cc: Carl Eisenschmeid
James Bagg
Harold Udell
Ken Ulreich
Peter Sanko
Francis Hyland
Anthony Taormina
J. R. Schubel
John VanderVeer
Malcolm Hair
George Proios
Steve Resler
Thomas Thorsen

Dredging Advisory Committee of the Regional Marine Resources Council
Record of Sixth Meeting 9 December 1976

Members

Present: Jim Bagg, Jeff Vaughan representing Carl Eisenschmeid, Robert Schlinger representing Francis Hyland, George Proios, Steven Resler, Peter Sanko, Gino Aiello representing Harold Udell, David Fallon representing Tony Taormina, Clinton Smith representing John Vander Veer, Ken Ulreich

Absent: Malcolm Hair, J. R. Schubel

Staff: Sy Robbins, Clarke Williams (Chairman)

Guests: Peter J. Puglese (ACE), Bob Will (ACE), Phil McGrade (ACE), Gordon Colvin (NY DEC), Carol Swick (SC Planning)

- I. Gordon Colvin, Regional Supervisor of Environmental Analysis, NY DEC Region II, reviewed the draft N.Y.-Conn. policy on spoil disposal in Long Island Sound. He requested assistance from the MRC in reviewing this policy, and described the interim program plan (for the period Mid 1977 through December 1979) being developed by Mr. Dennis Cunningham of the Conn. Dept. of Env. Protection.
- II. Sy Robbins led a discussion of criteria used to evaluate spoil disposal activities. Disposal within L.I. Sound or in nearshore waters is covered by EPA interim regulations published in the Federal Register on Sept 5, 1975 (40FR41291). Problems of beach disposal and effluent runoff from bulkhead fill were reviewed.
- III. Sy Robbins also presented a preliminary list of dredging criteria (see Attachment A). Questions arose as to desirability of the restrictions these criteria would place on the operating agencies. No established methodologies, which could be applied to planning for the entire region, could be identified. The preliminary planning criteria, therefore, will be reviewed by Mr. Robbins.

Dredging Advisory Committee of the Regional Marine Resources Council
Record of Sixth Meeting 9 December 1976

Members

Present: Jim Bagg, Jeff Vaughan representing Carl Eisenschmeid, Robert Schlinger representing Francis Hyland, George Proios, Steven Resler, Peter Sanko, Gino Aiello representing Harold Udell, David Fallon representing Tony Taormina, Clinton Smith representing John Vander Veer, Ken Ulreich

Absent: Malcolm Hair, J. R. Schubel

Staff: Sy Robbins, Clarke Williams (Chairman)

Guests: Peter J. Puglese (ACE), Bob Will (ACE), Phil McGrade (ACE), Gordon Colvin (NY DEC), Carol Swick (SC Planning)

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Regional Marine Resources Council

A COMMITTEE OF THE NASSAU-SUFFOLK REGIONAL PLANNING BOARD



Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) ~~724-2500~~ 979-2935

Dredging Advisory Committee

Notice of Meeting

There will be a meeting of the Dredging Advisory Committee on Thursday,
6 January 1977 at 2:00 p.m. in the 12th floor Conference Room, H. Lee

*Dennison Office Building, Veterans Memorial Highway, Hauppauge, N.Y.

The meeting will be devoted to:

1. Presentation by Dennis Cunningham on the L.I.S. dredge spoil disposal plan (tentative);
2. Continued discussion of methodologies for reviewing dredging projects;
3. Continued review of preliminary dredging criteria; and,
4. Presentation and review of a preliminary sample plan map.

Clarke Williams
Research Administrator

cc: C. Eisenschmeid M. Hair
J. Bagg G. Proios
H. Udell S. Resler
K. Ulreich T. Thorsen
P. Sanko
F. Hyland
A. Taormina
J. Schubel
J. Vander Veer

**Dredging Advisory Committee of the Regional Marine Resources Council
Record of Seventh Meeting 6 January 1977**

Members

Present: Jeff Vaughn (SCDPW), Jim Bagg (SCCEQ), Gino Aiello (Town of Hempstead), Ken Ulreich (USACE), Peter Sanko (NYS Sea Grant), Robert Schlinger (L.I. State Parks), Dave Fallon (NYSDEC), Ann Williams (MSRC), Clinton Smith (Town of Oyster Bay), George Prios (Town of Brookhaven), Steve Resler (Town of Smithtown), Tom Thorsen (Town of Southampton), John Munzel (Village of Greenport), Mr. Rowinski (Town of Southampton), Sandra Swenk (Village of Port Jefferson)

(Note: The attendance sheet was misplaced. Representatives from Sydney Baum Associates (for Town of Babylon) and for S.C. Legislator Donahue, were also in attendance.)

Guests: Gordon Colvin (NYSDEC Region I), Denis Cunningham (Conn. Dept. of Env. Protection), Andy Yerman (NYSDEC), Peter Puglese (USACE), Bob Will (USACE), Phil McGrade (USACE)

Staff: Sy Robbins, Clarke Williams (Chairman)

- I. Denis Cunningham, Senior Environmental Analyst, Water Compliance Unit, Connecticut Department of Environmental Protection, present a working draft of a proposed Dredged Material Disposal Management Program (copies were distributed). He outlined an interim program that would be in effect until a long range management plan for the disposal of dredged material in Long Island Sound can be completed (by Dec. 31, 1979), which would include:
 - a. Controlled disposal at specified disposal points within four designated disposal areas in Long Island Sound.
 - b. Establishment of a technical advisory committee on disposal composed of research scientists and cognizant state and federal interests.
 - c. Establishment of operational guidelines for the evaluation of the potential polluting characteristics of materials to be dredged and proposed to be disposed of in Long Island Sound.
 - d. Application of these operational guidelines, case-by-case, to determine when alternatives to open water disposal in Long Island Sound should be mandated.
 - e. Establishment of a long-term Long Island Sound disposal-area monitoring network.
 - f. Development of a dynamic long-term management program and environmental assessment of both dredging and disposal.

Mr. Colvin stated that monitoring would focus on long-term sediment quality impacts rather than short-term water column impacts (as measured by the elutriate or "shaker" test). Workshops will be held in February. Information may be obtained from Andy Yerman or Dave Fallon at NYSDEC Region I (751-7900).

II. Sy Robbins reviewed the products that the Board will be submitting to the New York State Dept. of State on March 31, 1977. These products include:

- A. Goals and Objectives - these have already been identified by the Citizens Participation Committee and are spelled out in the publication "Coastal Zone Planning Elements: Goals and Objectives" (with addenda), NSRPB 31 January 1976.
- B. Dredging and Spoil Disposal Criteria - these are now being developed by the MRC staff with the help of the DAC (see attached updated draft).
- C. Navigation Channel Map - this is now being prepared by the staff and will show the locations of existing and proposed channels and spoil areas, the responsible level of government, and the general design depths and widths based on the plan's criteria and the information available at the time of submission.

III. Sy Robbins reviewed the status of the Navigation Channel Map and once again requested all municipalities to submit their plans or "wish lists" so that they may be considered in time for the March 31, 1977 submission to New York State.



Regional Marine Resources Council

A COMMITTEE OF THE NASSAU-SUFFOLK REGIONAL PLANNING BOARD



Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) 234-2500 x 979-2935

Dredging Advisory Committee (DAC)

Notice of Meeting

There will be a meeting of the Dredging Advisory Committee on Thursday, 3 February, 1977 at 2:00 p.m. in the 12th floor conference room, H. Lee Dennison Office Building, Veterans Memorial Highway, Hauppauge, N.Y. All coastal municipalities in the Nassau-Suffolk Region are invited to participate.

The meeting will be devoted to:

1. Discussion on the Dredged Material Disposal Management Program for Long Island Sound developed by Mr. Denis Cunningham of the Conn. Dept. of Environmental Protection.
2. Discussion on draft dredging and spoil disposal criteria dated 1/27/77 (attached).
3. Discussion on analysis of local plans.

Attached find record of the DAC meeting held on 6 December, 1976.

All coastal municipalities are once again requested to submit their recommendations for navigation channels to the Marine Resources Council by February 11, 1977.

Clarke Williams
Research Administrator

Clerk
Village of Great Neck Estates
Great Neck Plaza
Great Neck, N.Y. 11021

Clerk
Village of Great Neck
51 Baker Hill Rd.
Great Neck, N.Y. 11023

Clerk
Village of Plandome
55 South Drive
Plandome, N.Y. 11030

Clerk
Village of Port Washington North
Soundview Dr.
Port Washington, N.Y. 11050

Clerk
Village of Flower Hill
Bonnie Heights Rd.
Manhasset, N.Y. 11030

Clerk
Village of Sea Cliff
Village Hall
Sea Cliff, N.Y. 11579

Clerk
Village of Bayville
14 School Street
Bayville, N.Y. 11709

Clerk
Village of Oyster Bay Cove
P.O. Box 146
Oyster Bay, N.Y. 11771

Clerk
Village of Lloyd Harbor
12 Middle Hollow Rd.
Lloyd Harbor, N.Y. 11743

Clerk
Village of Northport
124 Main Street
Northport, N.Y. 11768

Clerk
Village of Old Field
Box 724
Old Field, N.Y. 11733

Clerk
Village of Saddle Rock
45 Shelley Lane
Great Neck, N.Y. 11023

Clerk
Village of Thomaston
100 East Shore Rd.
Great Neck, N.Y. 11023

Clerk
Village of Plandome Manor
90 Gristmill Lane
Plandome Manor, 11030

Clerk
Village of Manorhaven
33 Manorhaven Blvd.
Port Washington, N.Y. 11050

Clerk
Village of Roslyn
One Paper Mill Road
Roslyn, N.Y. 11576

Clerk
City of Glen Cove
City Hall, Bridge Street
Glen Cove, N.Y. 11542

Clerk
Village of Mill Neck
Village Hall
Mill Neck, N.Y. 11765

Clerk
Village of Cove Neck
Cove Neck, N.Y. 11771

Clerk
Village of Huntington Bay
P.O. Box 144
Halesite, N.Y. 11743

Clerk
Village of Nissequoque
P.O. Box 352
St. James, N.Y. 11780

Clerk
Village of Poquott
Box R
East Setauket, N.Y. 11733

Clerk
Village of Kings Point
32 Steppingstone Lane
Kings Point, N.Y. 11024

Clerk
Village of Plandome Heights
Box 19
Manhasset, N.Y. 11030

Clerk
Village of Baxter Estates
2 Harbor Rd.
Port Washington, N.Y. 11050

Clerk
Village of Sands Point
P.O. Box 188
Port Washington, N.Y. 11050

Clerk
Village of Roslyn Harbor
500 Motts Road
Roslyn Harbor, N.Y. 11576

Clerk
Village of Laittingtown
Box 237
Locust Valley, N.Y. 11560

Clerk
Village of Centre Island
Centre Island, N.Y. 11771

Clerk
Village of Laurel Hollow
RD Box 1209
Moore's Hill Rd.
Syosset, N.Y. 11791

Clerk
Village of Asharoken
116 Asharoken Ave.
Northport, N.Y. 11768

Clerk
Head of the Harbor
103 Harbor Rd.
St. James, N.Y. 11780

Clerk
Village of Port Jefferson
121 West Broadway
Port Jefferson, N.Y. 11757

Clerk
Village of Belle Terre
Jefferson, N.Y. 11777

Clerk
Village of Dering Harbor
Shelter Island, N.Y. 11964

Clerk
Village of East Hampton
P.O. Box KKK
77 Main Street
East Hampton, N.Y. 11937

Clerk
Village of Westhampton Beach
P.O. Box 991, Sunset Ave.
Westhampton Beach, N.Y. 11978

Clerk
Village of Brightwaters
10 Seneca Drive
Brightwaters, N.Y. 11718

Clerk
Village of Amityville
1 Greene Ave.
Amityville, N.Y. 11701

Clerk
Village of Island Park
27 Long Beach Rd.
Island Park, N.Y. 11558

Clerk
Village of Lawrence
96 Central Ave.
Lawrence, N.Y. 11559

Clerk
Village of Hewlett Bay Park
9 Piermont Ave.
Hewlett Bay Park, N.Y. 11557

Clerk
Town of North Hempstead
20 Sandome Road
Manhasset, N.Y. 11030

Clerk
Town of Babylon
Town Hall, 200 E. Sunrise Hwy.
North Lindenhurst, N.Y. 11757

Village of Shoreham
P.O. Box 389
Shoreham, N.Y. 11786

Clerk
Village of North Haven
P.O. Box 986
Main Street
Sag Harbor, N.Y. 11963

Clerk
Village of Southampton
23 Main Street
Southampton, N.Y. 11968

Clerk
Village of Bellport
144 S. Country Rd.
Bellport, N.Y. 11713

Clerk
Village of Babylon
153 West Main Street
Babylon, N.Y. 11702

Clerk
Village of Massapequa Park
151 Front St.
Massapequa Park, N.Y. 11762

Clerk
City of Long Beach
City Hall, 1 West Chester St.
Long Beach, N.Y. 11561

Clerk
Village of Woodsburgh
30 Piermont Ave.
Hewlett, N.Y. 11557

Clerk
Village of Hewlett Harbor
499 Pepperidge Road
Hewlett, N.Y. 11557

Clerk
Town of Oyster Bay
Town Hall, Audrey Avenue
Oyster Bay, N.Y. 11771

Clerk
Town of East Hampton
Town Hall, 159 E. Pantigo Rd.
East Hampton, N.Y. 11947

Village of Greenport
236 Third Street
Greenport, N.Y. 11944

Clerk
Village of Sag Harbor
Main Street
Sag Harbor, N.Y. 11963

Clerk
Village of Quogue
Box 685
Quogue, N.Y. 11959

Clerk
Village of Patchogue
P.O. Box 719
Patchogue, N.Y. 11772

Clerk
Village of Lindenhurst
430 S. Wellwood Ave.
Lindenhurst, N.Y. 11757

Clerk
Village of Freeport
46 N. Ocean Ave.
Freeport, N.Y. 11520

Clerk
Village of Atlantic Beach
65 The Plaza
Atlantic Beach, N.Y. 11509

Clerk
Village of Hewlett Neck
30 Piermont Ave.
Hewlett, N.Y. 11557

Clerk
Town of Hempstead
Town Hall, Hempstead Town Plaza
Hempstead, N.Y. 11550

Clerk
Town of Brookhaven
Town Hall, 205 S. Ocean Ave.
205 S. Ocean Ave.
Patchogue, N.Y. 11772

Clerk
Town of Huntington
Town Hall, Main Street
Huntington, N.Y. 11743

Town of
655 Main Street
N.Y. 11751

Town of Smithtown
Town Hall, Main Street
Smithtown, N.Y. 11787

Clerk
Town of Riverhead
Town Hall, 200 Roanoke Ave.
Riverhead, N.Y. 11901

Clerk
Town of Southampton
Town Hall, Montauk Highway
Southampton, N.Y. 11968

Clerk
Town of Shelter Island
Town Hall, Ferry Road
Shelter Island, N.Y. 11964

Clerk
Town of Southold
Town Hall, Main Road
Southold, N.Y. 11971

Dredging Advisory Committee of the Regional Marine Resources Council
Record of Eighth Meeting 3 February 1977

Present: Steve Resler (Town of Smithtown), Robert Schlinger (L.I.S. Park Comm.) Harold Udell and Gino Aiello (Town of Hempstead), H. W. Warner, Jr. (Town of Oyster Bay), Kenneth Ulreich and Robert Will (USACE), Peter Sanko (NYS Sea Grant), Dr. Peter Weyl (MSRC), Jeff Vaughn (SCDPW), David Fallon (NYSDEC), William Denton (Town of Huntington), Malcolm Hair (Town of Islip), Ken Feustel and Bruce D'Abramo (Town of Babylon)

Guests: Robert Nelson (Lindenhurst Dredge & Dock Corp.), Edward Parthe (Marine Contractors Assn.), Carol Swick (NSRPB)

Staff: DeWitt Davies, Sy Robbins, Clarke Williams (Chairman)

- I. The record of the seventh DAC meeting on 6 Jan. 1977 was amended to show the following additions and corrections:

Present: Mayor George Johnson (Village of North Haven), Trustee John Golaski (Village of Sag Harbor), Willard Hudson (Amityville DPW), Mayor Sandra Swenk (Village of Port Jefferson), Trustee Thomas Rewinski (Town of Southampton), Trustee Frank Smith (Town of Southampton), H. W. Warner, Jr. (Town of Oyster Bay), Richard Pollak (Town of Oyster Bay), Trustee Eric Corwith (Town of Southampton), Bruce Doscher (aide to S.C. Legislator Donahue), Jim Matola (SCDPW), Tony Taormina, Dave Fallon, Gordon Colvin, and Andrew Yermin (NYSDEC), Steve Resler (Town of Smithtown), George Proios (Town of Brookhaven), Robert Schlinger (LISPC), Jim Bagg (SCCEQ), Gino Aiello (Town of Hempstead), Ann Williams (MSRC), Ken Ulreich (USACE)

Guests: Peter Puglese and Philip McGrade (USACE), Robert Brown (Sidney Bowne & Son, Village Engineers for Amityville), William Roberts (L.I. Traveler Watchman), Denis Cunningham (Conn. Dept. of Env. Protection)

- II. The draft dredging and spoil disposal criteria dated 1/27/77 were discussed in detail. As a result, minor modifications were made to the wording of dredging criteria 3, 4, 5, 7, 8, 11, 12 and 13. Dredging criteria 6 concerning the design of navigation channels serving commercial areas was changed by dropping the percentile criteria and substituting consideration of the largest class of commercial vessels. Modifications to spoil disposal criteria were made by substituting the terms high and low impact potential for the terms polluted and clean, and by adding a criterion for fine-grained material. Criteria 8 concerning side-casting was dropped. Other minor wording changes were made in the spoil disposal criteria, including the definition of "deep hole". All these changes are reflected in the criteria dated 2/7/77, copies of which are available upon request.

Note: The next DAC meeting will be held when the staff has received a sufficient number of responses on the draft criteria from Federal CZM coordination contacts.



Regional Marine Resources Council

A COMMITTEE OF THE NASSAU-SUFFOLK REGIONAL PLANNING BOARD



E. C. STEPHAN
CHAIRMAN

LEE E. KOPPELMAN
EXECUTIVE DIRECTOR

CLARKE WILLIAMS
RESEARCH ADMINISTRATOR

Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) 724-2500

Dredging Advisory Committee (DAC)

Notice of Meeting

There will be a meeting of the Dredging Advisory Committee on Thursday, 26 May 1977 at 2:00 p.m. in the 12th floor Conference Room, H. Lee Dennison Office Building, Veterans Memorial Highway, Hauppauge, New York.

The meeting will be devoted to a final review of the DAC Dredging and Spoil Disposal Guidelines. Hopefully, the DAC will be able to reach a consensus on the incorporation of these guidelines into the existing MRC guidelines.

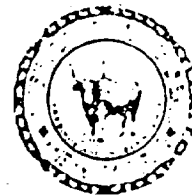
Attached is a copy of the draft DAC guidelines dated 5/16/77. In addition, the following guidelines (criteria) cited in the EIA for the Southwest Sewer District #3 outfall (pg. 36-37) will be discussed:

1. Use construction (dredging) procedures to minimize suspended solids to less than or equal to 100 mg/l (100 ppm) outside of the construction (dredging) right-of-way.
2. Remove and transplant hard clams within the construction (dredging) right-of-way prior to initiation of dredging operations.
3. Restrict depth of sedimentation resulting from dredging operations to less than 9 mm (0.4 inches) during those periods when the water temperature of the bay is less than 10°C (50°F) to insure protection of the hard clam population (mercenaria mercenaria).
4. Restrict spoil island elevations to + 4.6 meters (+ 15 feet). (Note: this was in regard to spoil storage.)
5. Limit effluents from confined disposal areas adjacent to embayment waters to less than 8 grams/liter (8,000 ppm) above those of the background waters.

Please contact the Marine Resources Council staff if you will not be able to attend this meeting.

Clarke Williams
Research Administrator

Sy Robbins
Planner



Regional Marine Resources Council

A COMMITTEE OF THE NASSAU-SUFFOLK REGIONAL PLANNING BOARD

Veterans Memorial Highway, Hauppauge, L. I., N. Y. 11787

Telephone (516) 224-2500 or 979-2935

Navigation Channel Dredging & Spoil Disposal Guidelines (Draft 6/6/77)

Introduction - The following guidelines are an update and elaboration of the existing Regional Marine Resources Council dredging and spoil disposal guidelines as they pertain to navigation channel projects, although many will also be relevant to other types of dredging. These new guidelines set forth planning "rules of thumb" as specifically and quantitatively as is presently possible, while recognizing the need to take local conditions into account. They are intended to be used as planning tools by those who wish to design or review dredging projects; they are not intended to dictate engineering specifications or regulatory requirements. The application of these guidelines should result in a clearer understanding of the reasoning behind the design and execution of channel dredging projects, and thus should help ensure greater public acceptance and swifter regulatory processing.

Dredging Guidelines

- A.1 Determine the need for maintenance dredging of navigation channels through periodic field surveys and investigations of accidents. Avoid dredging, wherever possible, through the movement, alteration, or addition of navigation aids, or through the establishment or enforcement of traffic control regulations.

Explanation: The "maintenance" of navigation channels should include the provision and accurate positioning of adequate channel markings. Channels need not be maintained, especially where natural shifting of bottom sediments occurs, as long as the designated channel dimensions are available, the channel can be accurately marked, and navigation of channel curves is feasible. Accurate channel marking and enforcement of traffic control measures (e.g., speed, passing rules) should reduce the number of accidents and the demands for maintenance dredging.

- A.2 Cease to maintain underutilized navigation channels through or adjacent to highly productive and sensitive natural areas whenever reasonable alternative routes exist.

Explanation: The need for navigation channel maintenance should be based on present and potential usage, and should take into consideration dredging, spoil disposal, and boating impacts on the environmental values of wetlands, shellfish beds, etc.

- A.3 Create new navigation channels only when the facilities to be served are vital to the economic and social development of the surrounding area and only when such facilities cannot reasonably be located adjacent to existing channels or open water.

Explanation: The high potential environmental costs of dredging new channels should be given considerable weight in the planning process. The availability of vacant land, and the expansion capacity of existing facilities adjacent to existing channels or open water should be evaluated before new channels are dredged.

- A.4 Commence the dredging of new navigation channels, or the deepening or widening of existing channels, only after the effects of such projects on ground-water resources have been reasonably determined and found to be environmentally acceptable.

Explanation: Detailed hydrologic studies should be conducted, especially where confining sediment layers may be present or where a significant freshwater interface exists (e.g., within streams).

- A.5 Designate the maintenance depth of navigation channels utilized only by recreational boating traffic so as to provide, at Mean Low Water, a 3 ft clearance for 90% of the boats presently using, or reasonably expected to be using such channels, given the location, depth, and other characteristics of the water body(s) involved.

Explanation: The depths of navigation channels should provide for safe navigation at low tide and should be based on a detailed analysis of the number and types (drafts) of boats utilizing the channels. Channel depth design should not be based on a small percentage of inappropriately large boats that may be utilizing a channel.

- A.6 Designate the maintenance depth of navigation channels serving commercial (industrial) facilities centers so as to provide, at Mean Low Water, a 3 ft clearance for the largest class of vessels using, or reasonably expected to be using, such channels.

Explanation: The drafts of commercial vessels should be the primary concern in the design of channels serving major commercial areas, even though large numbers of smaller recreational boats may also be utilizing such channels.

- A.7 Designate the maintenance width of navigation channels serving boat ramps at approximately 50 ft, marinas and other recreational facilities at up to 100 ft, and major commercial facilities at up to 200 ft, unless wind, current, or other unique local conditions necessitate the greater separation of boating traffic.

Explanation: The size range of boats utilizing navigation channels should be a primary consideration in the design of channel widths. The need for wide channels and large traffic lane separations should be minimized by establishing and enforcing channel speed and passing regulations.

- A.8 Locate new navigation channels so as to provide at least a 500 ft buffer zone between boating traffic and sensitive natural areas (e.g., wetlands, wildlife sanctuaries), rapidly eroding shorelines, or bathing beaches, unless smaller buffer zones can be shown to be unavoidable and/or appropriate.

Explanation: Channel location should take into account the impacts of boat-related turbidity, waves, fumes, noise, etc., on coastal resources and human uses.

- A.9 Limit the allowable "overdepths" during dredging operations to no more than 2 ft so as to minimize spoil volumes and avoid the creation of irregular channel bottoms or deep holes.

Explanation: Some overdredging should be expected if desired channel depths are to be attained, since limitations exist on the accuracy of dredging techniques. Follow-up surveys should be conducted to ascertain new channel dimensions.

- A.10 Limit "premaintenance" of navigation channels to those few areas that are highly prone to shoaling and to depths for which cost-effectiveness can be shown.

Explanation: Reductions in maintenance frequency through premaintenance should be demonstrated and weighed against increased economic and environmental costs.

- A.11 Limit slopes on navigation channel sides, based on slumping characteristics, up to a maximum slope of 1 on 3. Adjust channel locations and widths, if possible, to minimize slumping of adjacent lands or mud flats.

Explanation: Planning for new (or enlarged) navigation channels should include an analysis of sediment properties within the right-of-way to determine stable slope angles. Slopes should be limited so as to prevent rapid infilling of the channel. The effects of unavoidable slumping on bordering bottom and uplands should also be considered.

- A.12 Limit maximum changes, due to navigation channel dredging, of water levels at the heads of embayments at Mean Low Water and Mean High Water to 3 inches, or 5% of the mean tidal range, whichever is less.

Explanation: Channel dredging operations at the mouths or interiors of embayments with restricted tidal ranges should be monitored closely so that undesirable impacts due to tidal range changes can be avoided, including changes in salinity, exposure of mudflats, drowning of low-lying lands, etc.

- A.13 Perform navigation channel dredging operations so as to minimize interference with boating and shoreline activities.

Explanation: The timing of channel dredging operations should cause as little inconvenience as possible to other users of the coastal zone. The peak boating and bathing months between Memorial Day and Labor Day should be avoided, if possible.

- A.14 Perform major navigation channel dredging operations involving more than 10,000 cubic yards of fine grained sediments (greater than 20%, by weight, of particles

less than 1/16 mm in diameter) only during winter months (late September to late March), if possible, so as to minimize potential impacts on fish and shellfish spawning, and rapid algal and attached plant growth.

Explanation: Channel dredging operations involving large volumes of fine grained material have a high potential for adverse biological impacts and should be scheduled, whenever possible, during those times of the year when releases of nutrients, and increases in turbidity (reductions in light penetration) will have the smallest impacts on important local biota.

- A.15 Require the removal and/or transplantation of significant hard clam stocks located within the right-of-ways of navigation channels prior to the initiation of dredging operations; and limit sedimentation depths (resulting from dredging operations) outside of the right-of-ways to less than 1/2 inch during periods when water temperatures are less than 50° F and hard clams are dormant.

Explanation: Sampling for hard clam populations should be conducted prior to channel dredging. Sedimentation should be limited during times of clam inactivity to prevent burial of clam siphons.

Spoil Disposal Guidelines

- B.1 Develop long-range spoil disposal management strategies for each navigation channel, and identify and, if necessary, reserve sites for long-term spoil management.

Explanation: Periodic maintenance of navigation channels is inevitable, and planning should consider future as well as present spoil disposal needs.

- B.2 Use unpolluted coarse grained spoils (sand and gravel fractions, 1/16 mm or larger in diameter, comprising more than 80%, by weight) for beach nourishment, shoreline development or stabilization, and the creation of wetland or upland habitats.

Explanation: Clean coarse grained spoils should be considered a resource and should be put to constructive use.

- B.3 Use unpolluted fine grained spoils (silt and clay fractions, less than 1/16 mm in diameter, comprising more than 20%, by weight) for beach nourishment only on beaches fronting well flushed waters (Pollution Susceptibility 50 or less as indicated on Long Island CZM maps); and for shoreline development or stabilization, and habitat creation only when suspended solids in spoil site effluents can be kept to less than 8 grams/liter (8,000 ppm) above background levels in bordering receiving waters.

Explanation: Unpolluted fine grained spoils should be considered a resource and should be used for constructive purposes consistent with their physical properties. Special conditions, safeguards, and management techniques, including screening or biological filtering of effluents, should be employed to prevent turbidity impacts on bordering receiving waters.

- B.4 Use fine grained organic rich spoils (loss on ignition or volatile solids greater than 5%) for beach nourishment only where guideline B.3 is satisfied and undesirable residues will not remain on the beach; and for shoreline development or stabilization, and habitat creation only where guideline B.3 is satisfied and significant nutrient enrichment of bordering waters can be prevented.

Explanation: Fine grained dredge spoil with high organic contents should be used for constructive purposes but should be given additional treatment, including the use of physical, chemical, and biological methods to minimize the potential for eutrophication of bordering receiving waters.

- B.5 Use dredge spoil polluted with grease, oil, pesticides, heavy metals, etc. for beach nourishment, shoreline development, or habitat creation only after adequate pretreatment, or on-site treatment, so as to assure that undesirable pollutants do not return to bordering waterways.

Explanation: Planning should provide for pretreatment of polluted spoils at special management areas, or for adequate treatment at the actual spoil disposal site. Inland disposal (e.g., in landfills) and open water disposal (e.g., in Long Island Sound or the New York Bight) should not be considered viable longterm management techniques for polluted spoils.

- B.6 Use unpolluted or properly pretreated dredge spoils to fill in deep, anoxic unproductive, man-made holes in channel and bay bottoms, and cap with material compatible with surrounding sediments, if necessary.

Explanation: Man-made deep holes are often undesirable sediment traps and should be restored to a condition compatible with the surrounding natural bottoms. Naturally occurring deep holes usually indicate severe scouring conditions and should not be considered suitable sites for spoil disposal.

- B.7 Use open water disposal for dredge spoils only after all other alternatives have been found to be infeasible.

Explanation: Open water disposal is not a constructive use of dredge spoil and should not be considered a desirable long-term disposal method where other feasible alternatives exist.

- B.8 Prevent the deposition of dredge spoils on intertidal marshes, high marshes, salt meadows, or coastal fresh marshes as defined under New York State's tidal and freshwater wetlands acts.

Explanation: The disposal of dredge spoil should take into consideration the values of wetlands for marine food production, wildlife habitat, flood and storm surge control, sedimentation control, water purification, recreation, education and research, open space and aesthetic appreciation, etc.

- B.9 Use dredge spoils for beach nourishment during the period from late November through early March, if possible, and deposit spoils no closer than 1/2 mile from inlets lacking protective jetties, and "downdrift" of inlets where littoral transport is basically unidirectional.

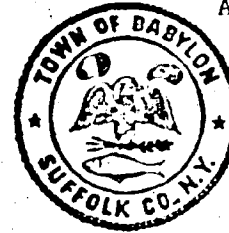
Explanation: Beach nourishment operations should be scheduled so as to avoid conflicts with shoreline users, including recreational fishing, and should be designed so as to minimize the likelihood that spoils will be transported back into inlet channels and embayments.

- B.10 Select spoil site locations and utilize management techniques so as to minimize erosion from water and wind. Use dewatering techniques to assure drying within two years of the time of deposition.

Explanation: Areas of high wave, water current, or wind erosion should not be selected as spoil management sites. Fringing wetlands, sand fences, and upland vegetation should be used to prevent erosion, and vegetation or shallow wells should be used to promote drying.

Town of Babylon

THOMAS F. FALLON, SUPERVISOR



COUNCILMEN

RAYMOND ALLMENDINGER

LOUIS J. MAESTRI

200 EAST SUNRISE HIGHWAY, LINDENHURST, N. Y. 11757

SONDRA M. BACHETY

HAROLD WITHERS

TELEPHONE 957-3153

Commissioner OF ENVIRONMENTAL CONTROL

ROBERT W. RITZERT

February 8, 1977

Mr. Sy Robbins
Dredging Advisory Committee
Regional Marine Resources Council
Veterans Memorial Highway
Hauppauge, New York 11787

Dear Mr. Robbins:

Please find below a listing of canals that are in need of dredging in the Town of Babylon. These were brought to our attention by local citizenry who have experienced navigational problems in these areas. Undoubtedly, additional canals will be in need of dredging at some time in the future.

Howell's Creek - Copiague
Ketcham's Creek - Amityville
Neguntatogue Creek - Village of Lindenhurst
Tombart Canal - Copiague
Bayview Canal - Village of Lindenhurst
Sunnypoint Canal - Village of Lindenhurst
Grand Canal - Copiague
Narasketuck Creek - Village of Amityville
East Fox Creek Channel

If you desire any further information, please do not hesitate to contact our office.

Sincerely yours,

Robert W. Ritzert,
Commissioner
Environmental Control

RWR:dv

cc: Supervisor Fallon
Councilman Maestri/Withers

TOWN OF BROOKHAVEN



DEPARTMENT OF ENVIRONMENTAL PROTECTION
475 E. Main Street, Patchogue, N.Y. 11772
(516) GR 5-5500, Ext. 380

RECEIVED
FEB 10 1977
BROOKHAVEN, N.Y.

February 8, 1977

Dr. Clarke Williams, Research Administrator
Regional Marine Resources Council
Veterans Memorial Highway
Hauppauge, L.I. N.Y. 11787

Dear Dr. Williams:

The following is a listing of those areas within the Town of Brookhaven which I feel may require some form of dredging operation sometime in the near future. It is based on a limited amount of information and data and therefore, should not be considered as all conclusive.

I. NORTH SHORE

A. Pt. Jefferson Harbor - As you probably know there has been on the drawing boards for some time a proposal to dredge the existing channel in Pt. Jefferson. The implementation of this proposal seems to depend a great deal upon local cooperation. At this point in time the Town of Brookhaven has not taken any position with regards to this project.

B. Mt. Sinai Harbor - There is presently a dredging operation being undertaken at the mouth of Mt. Sinai Harbor to remove a sandbar that has accumulated in this area. There should be no further need for dredging for several years once this has been accomplished. Any plans for dredging the channel within the harbor have been completely abandoned inasmuch as this area has now been declared a Marine Sanctuary.

II. SOUTH SHORE

A. Carman River - The mouth of Carman River has been experiencing shoaling between Long Point and Sandy Point and extending 400 yards south.

-2-

B. Pattersquash Creek - Shoaling has been occurring in the channel from a point East of Poplar Road to a point south of Locust Drive. The area considered is approximately 500 yards in length.

C. Forge River - A navigational problem exists at a point north and south of where the Forge River channel meets Old Neck Creek. The area involved is approximately 400 yards in length. A problem also exists at the mouth of Forge River between Forge Point and Masury Point, an area approximately 300 yards in length.

D. Old Neck Creek & Sennix Creek - A large amount of shoaling material has been accumulating in the channel connecting both Old Neck Creek and Sennix Creek, approximately 200 yards in length. The County D.P.W. has already submitted plans to have this area dredged and are awaiting proper permits before they begin.

E. Orchard Neck Creek - Some shoaling exists at the center of the creek at a point east of Inlet View Place extending 180 yards to the south.

F. Tutthills Cove - An area approximately 900 yards in length requires some maintenance dredging beginning at the mouth of the cove, Buoy #3 and extending southward to the state channel.

G. Harts Cove - Shoaling has occurred in the channel extending from a marina near the end of Shore Road extending 200 yards out to the cove. Also the channel that runs from the main channel westerly to the end of Montauk Avenue is almost entirely non-existent and is approximately 600 yards in length.

The above information was compiled from U.S. Coast Guard Moriches Station and a Brookhaven Town Harbor Master's personal observations. Should you require any additional data or information on any of the above please contact me.

Very truly yours,

George Proios
George Proios
Director

GP/rm

Attachment H

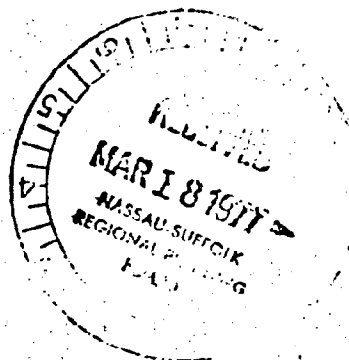
MICHAEL J. TULLY, JR.
SUPERVISOR



COMMISSIONER OF PLANNING
RESEARCH & DEVELOPMENT
RICHARD F. ANTONOFF

Town of North Hempstead

TOWN HALL
MANHASSET, N. Y. 11030
TELEPHONE 516 627-0590



March 17, 1977

Mr. Sy Robinson
N-S Regional Planning Board
H. L. Dennison Bldg., 12th floor
Hauppauge, NY 11787

Dear Mr. Robinson:

Enclosed is an annotated copy of the NOAA chart for Manhasset Bay and Hempstead Harbor showing the major boating channels in this Town. The notations concerning the status of these channels are unofficial but felt to be accurate. All of the channels shown are used for both recreational and commercial purposes; not included are short, single-purpose channels for launching ramps, docks, and marinas.

The additional enclosures are self-explanatory copies of correspondence concerning possible dredging in the southern end of Manhasset Bay.

I trust that this material will be helpful to you.

Cordially,

Kevin Quinn
Environmental Control Specialist

KQ:jf



OFFICE OF THE SUPERVISOR

TOWN HALL

SHELTER ISLAND, N. Y. 11964

NOV 3 1976

LEONARD T. BLISS
SUPERVISOR

November 1, 1976

(516) 749-0015

Lee E. Koppelman, Executive Director
Nassua-Suffolk Regional Planning Board
Veterans Memorial Highway
Hauppauge, New York 11787

Dear Mr. Koppelman:

The following is a list of areas on Shelter Island where we
• have indicated to the County of Suffolk that a maintenance dredging
schedule be set up.

West Neck Creek	South Ferry Inlet
✓ Crab Creek	✓ Coecles Harbor Inlet
Dickerson Creek	✓ Congdon's Creek
✓ Chase Creek	Menantic Creek
✓ Gardiner's Creek	Log Cabin Creek

At this point there are no other related shoreline development
plans under consideration by the Town of Shelter Island.

Very truly yours,

Leonard T. Bliss
Supervisor

LTB/fd



Head of Pond Road
Water Mill, N. Y.
11976

SOUTHAMPTON TOWN
ENVIRONMENTAL BOARD

SOUTHAMPTON, L.I., NEW YORK 11968

December 7, 1976

Mr. Lee E. Koppelman
Executive Director
Nassau/Suffolk
Regional Planning Board
Veterans Memorial Highway
Hauppauge, N. Y. 11787


Dear Mr. Koppelman,

In answer to your letter of October 25, 1976 to Southampton Town Supervisor Theodore O. Hulse concerning Coastal Zone Management, we would like to inform you that we have no shoreline development projects at the present time, that we are aware of, except "Fordune".

The proposed development of "Fordune" in Water Mill is in the preliminary planning stages. Preliminary maps have been reviewed by our Board and recommendations have been made to the Southampton Town Planning Board.

As to dredging projects, dredging falls under the jurisdiction of the Southampton Town Board of Trustees, and any information pertaining to proposed dredging projects would have to be acquired from them. We have no information at the present time of any coastal dredging projects.

Cordially yours,


Gilbert S. Foster
Chairman

GSF:gn

cc: Hon. T. O. Hulse, Supervisor
Town of Southampton

SIDNEY B. BOWNE & SON

Nassau-Suffolk Regional Planning Board
Page 2
February 16, 1977

necessary to alleviate documented navigational hazards for the boating community presently utilizing the waters.

Dredging of new channels and deepening of existing channels should not be undertaken until the effects upon the adjacent communities have been aired and evaluated by a public hearing and community participation.

We remain available for future consultation and look forward to reviewing a copy of your draft Coastal Zone Management Plan.

Very truly yours,

SIDNEY B. BOWNE & SON
CONSULTING ENGINEERS

[Signature]
ROBERT W. BROWN, L.S.

RWB:jd

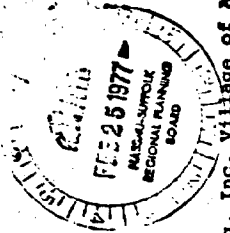
cc: H. O. Martin, Jr. Mayor
W. N. Hudson, D.P.W.

SIDNEY B. BOWNE & SON

CIVIL ENGINEERS
559 SUNRISE HIGHWAY
W. BABYLON, N. Y. 11704

February 16, 1977

Telephone
746-2350
746-2351
Cable Address
SIDBOW



Sidney B. Bowne 11922-19591, P.E. & L.S.
Sidney B. Bowne, Jr., P.E.
Erin C. Gregg, P.E. & L.S.
Chester C. Kiley, P.E. & L.S.
Robert L. Anderson, P.E.
Alexandria W. Marcell, P.E.

George A. Sytle, P.E.
Thomas R. Pyncheon, L.S.
Robert A. Stanton, P.E.
Nassau - Suffolk Regional Planning Board
H. Lee Dennison
Executive Office Building
Veterans Memorial Highway
Hauppauge, New York 11737

Attention: Mr. S. Robbins

Re: Coastal Zone Management Planning, Inc. Village of Amityville
(SSB No. 86048)

Gentlemen:

As requested at our January 6th meeting the following information along with the attached map will outline the dredging needs in the water adjacent to the Village of Amityville:

Water Course	Adjacent Zoning	Recommended Min. Depth Below MLW	Boat Population Character
Narasketuck Creek	Residential, Some Boat Yards and Marinas	4'±	Small sailboats to large power boats
Hoover Canal) Park Hill Canal) Gardiner Canal) Fleming Canal) Meyers Canal) Unqua Canal)	Residential	4'±	Small sailboats to large power boats
Amityville Creek	Residential, Some Boat Yards and Marinas	6'±	Small sailboats to large power boats
New Point Creek	Residential, Boat Yard and Public Ramp at Village Park	4'±	Small sailboats to large power boats
Ketchans Creek) Bayview Canal) New Point Canal) Bayside Canal)	Residential, Some Boat Yards and Public Park	4'±	Small sailboats to large power boats

Dredging of channels must be limited to the removal of material



Nassau-Suffolk Regional Planning Board



H. Lee Dennison, Executive Director
Veterans Memorial Highway, Hauppauge, N.Y.

Area Code 516 225 1511

December 27, 1976

Harold V. Gleason
Chairman

Eth A. Hubbard, Esq.
Vice Chairman

Vincent R. Balletta, Jr.

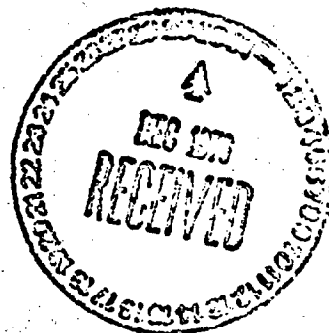
Robert D. Bell

Robert J. Flynn

Thomas Halsey

Lee E. Koppelman
Executive Director

Honorary:
Leonard W. Hall
H. Lee Dennison



Ms. Anita T. Baxter, Village Clerk
Village of Babylon
153 West Main Street
Babylon, NY 11702

Dear Ms. Baxter:

The Nassau-Suffolk Regional Planning Board is presently engaged in Coastal Zone Management Planning for all of Long Island. Part of this effort will involve the identification of coastal dredging projects that may involve County, State, or Federal permits and/or funds, so that future processing of such projects may be expedited.

Your village is invited to participate in this process by presenting dredging information and related shoreline development plans to the Board's Dredging Advisory Committee (DAC) of the Regional Marine Resources Council. The next DAC meeting will be held on Thursday, January 6 at 2:00 p.m. in the 12th floor conference room in the H. Lee Dennison Building, Veterans Memorial Highway, Hauppauge, N.Y. Information on DAC meetings may be obtained by calling Mr. Sy Robbins at 979-2535. Please pass this information to Mayor Hanse and the members of the Village Board.

Sincerely,

Lee E. Koppelman
Lee E. Koppelman
Executive Director

LEK:dat

MR KOPPELMAN
ENCLOSED IS VILLAGE MAP WITH VILLAGE OWNED
BOAT MOORING AREAS SHADIED IN RED. THESE
AREAS MAY REQUIRE FUTURE DREDGING TO
DEEPEN THEM. — J.T. Morris, Village Trustee

THE INCORPORATED VILLAGE OF BAYVILLE
NASSAU COUNTY, NEW YORK 11709
TELEPHONE NA 8-1439

MAYOR

J. HOWARD STAPLETON

BOARD OF TRUSTEES

PATRICK F. CAPUTO
EDWARD J. ESPOSITO
ALFRED C. HESSE
JOAN A. IMHOF
GEORGE NIFOROS
WILLIAM H. WRIGHT

VILLAGE CLERK-TREASURER

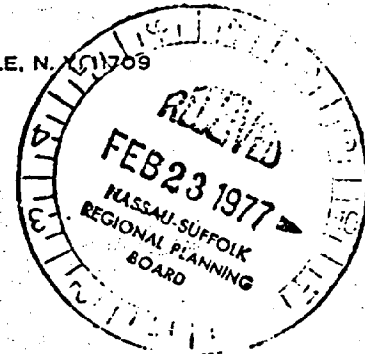
EUGENE F. DECLUE

VILLAGE ATTORNEY

VICTOR M. ORT

February 22, 1977

BAYVILLE, N. Y. 11709



Mr. Sy Robbins
H. Lee Dennison Building
Veterans Memorial Parkway
Hauppauge, N. Y. 11787

Dear Mr. Robbins:

In accordance with our telephone conversation I am enclosing herewith a copy of the boat channel for the Creek Beach area for the Inc. Village of Bayville,

Please note the markings in red which give the information which you requested and our recommendations for that area.

The types of boats are also listed and approximately 100 boats are moored within our waters and over 100 use the ramps.

Please do not hesitate to contact this office if we can be of any further assistance.

Very truly yours,

A handwritten signature in cursive script that reads "Eugene F. DeClue".

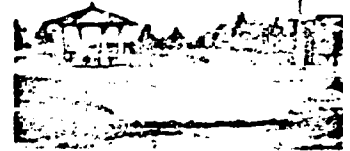
Eugene F. DeClue
Village Clerk Treasurer

BL
encs.

INCORPORATED
VILLAGE OF BRIGHTWATERS
BRIGHTWATERS, NEW YORK 11718

RUSSELL A. GRACY, Mayor

516 MOhawk 5-1280



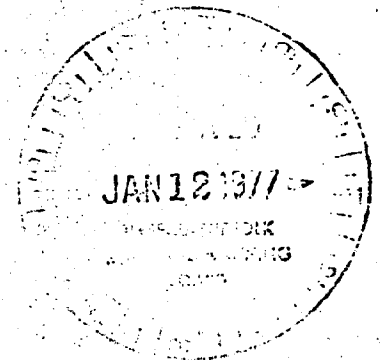
TRUSTEES

ROBERT S. GILBERT
DAVID C. PETERSON
ALVIN S. KAWECKI
ROBERT S. ALLEN

ANNA MAY GARBEDIAN
Village Clerk
ABRAHAM L. NADELSON
Treasurer
MOSES NELSON
Village Justice
JAMES R. WILLIAMS
Village Attorney

January 11, 1977

Mr. Lee E. Koppelman, Exec. Director
Nassau/Suffolk Regional Planning Board
H. Lee Dennison Executive Office Bldg.
Veterans Memorial Highway
Hauppauge, N.Y. 11787



Dear Mr. Koppelman:

In reply to your letter of December 27, 1976 regarding coastal dredging projects, please be advised that there are no plans at present which would involve projects of this type.

Thank you for advising us of this matter.

Very truly yours,

Anna May Garbedian
Anna May Garbedian
Village Clerk

COASTAL ZONE MANAGEMENT PROGRAM
DOCUMENTATION OF THE NATIONAL INTEREST
IN FACILITY SITING

Prepared by

Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787

Dr. Lee E. Koppelman
Project Director

15 June 1977

Task 4.1

Contract Number D93967

The preparation of this report was financially aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This report was prepared for the New York State Department of State.

This table is a mechanism established to coordinate tasks undertaken pursuant to the Nassau-Suffolk Regional Planning Board Coastal Zone Management planning program with local governments, regional, State and Federal agencies that have interests in the coastal zone. The table represents a summary of all communications held between the Board and interested agencies, including but not limited to an exchange of letters, reports, and data. Meetings whether formal or informal are documented to demonstrate the Board's continuing effort to update all interested parties as the planning effort proceeds. Through periodic updates, this table documents Federal and State agency contacts and will assist the Board in documenting the need for additional communication to prevent conflicts from arising whenever possible, between the NSRPB Coastal Zone Management Program and agency policies, plans and programs.

The table documents:

1. the agencies contacted;
2. whether or not a response was received;
3. whether there is a particular federal interest;
4. agency commitments to forward additional information;
5. agency on NSRPB requests for formal or informal meetings;
6. information received that may be pertinent to a particular subplan;
7. meetings held pursuant to agency or NSRPB regulations; and
8. agency requests to review the CZM plan on subplans.

Several of the columns have been left blank because the planning process has not proceeded to the stage that will require the level of activity indicated in the columns.

Contacts with local governmental entities are not documented in this table but have been documented in the section on public participation. However, repre-

sentatives of the following local governmental agencies have participated in Citizen Participation Committee meetings: 1) Planning Department, Town of Islip; 2) Department of Environmental Protection, Town of Brookhaven; 3) Nassau County Planning Commission; 4) Suffolk County Council on Environmental Quality; 5) Suffolk County Soil and Water Conservation District; 6) Nassau County Health Department; 7) Planning Department, Town of Huntington; 8) Department of Environmental Control, Town of Babylon; 9) East Hampton Town Planning Board; 10) Department of Planning and Economic Development Town of Hempstead; 11) Supervisor, East Hampton Town; 12) Department of Environmental Control, Town of Islip; 13) Department of Planning and Development, City of Long Beach; 14) Shellfish Management Commission Islip Town; 15) Suffolk County Department of Public Works; 16) Suffolk County Cooperative Extension; 17) Department of Planning, Town of Hempstead; 18) Department of Planning Town of Smithtown; 19) Department of Environmental Protection, Town of Huntington; 20) Department of Conservation and Waterways, Town of Hempstead. In addition, village trustees and mayors have regularly attended CPC meetings.

The Nassau-Suffolk Regional Marine Resources Council (MRC) has been and will continue to be used as a sounding board for Coastal Zone Management subplans. The MRC has been instrumental in the development of the Fisheries and Dredging subplans. Many federal agency local offices, in addition to local agencies, are represented on the MRC.

Agency	Date Correspon- dence Forwarded	Response Received Federal Interest in Bureau - Suffolk	Agency Will Provide Additional Materials (yes - no)	Agency NSRPS Requests Meeting Meeting	Agency Has Provided Comments Requests on or Related to the Following Meeting Subplans:	Agency Requests Further Discussion with NSRPS Staff on the Following Subplans	Meeting Held Pursuant to Request	NSRPS Reply to Comments Date	Agency Requests Opportunity to Review CDM Plan
U S I Nat'l. Park Service	2/9/77	Yes	No	No	X	Energy Fisheries Dredging GAPC Land Capability Water Capability Erosion		Yes 3/14/77	
U S Dept. of Commerce NMFS	1/22/77	Yes	Yes	No					Yes
U S EDA	2/2/77	Yes	Yes	No					No
NTS Division of Military and Naval Affairs	2/2/77	Yes	No	No					Yes
U S Dept. R.E.W.	2/2/77	Yes	Yes	Yes				Should Reply	
U S DOT Fed. Hwy. Admin.	2/2/77	Yes	Yes	Yes					
Dept. of the Air Force	2/2/77	Yes	No	No					
U S Gen. Services Administration	2/2/77	Yes	No	No					
U S Federal Energy Administration	2/2/77	Yes	Yes	No				Not Required	Yes
U S Dept. of Commerce Maritime Admin.	2/2/77	Yes	Yes	No				Not Required	Yes
USDI Bureau of Mines	2/2/77	Yes	No	Yes (Information)				Not Required	Yes
U S DOT	2/2/77	Yes	No	Yes (Information)				Not Required	Yes
HUD	2/2/77	Yes	Yes	No				Not Required	Yes
U S Dept. of Commerce NMFS	2/9/77	Yes	No	No				Not Required	Yes
USDA SCS	2/9/77	Yes	No	No				Not Required	No
NRC	2/2/77	Yes	Yes	No				Not Required	No (Should Send Energy Subplan)
U S Dept. of Commerce NMFS	12/13/76	Yes	Yes	No				Not Required	Suggests Forwarding Fisheries Subplan to Adjacent Coastal States
US EPA	2/5/77	Yes	Yes	No				Yes	Expressed Willingness to Meet with NSRPS STAFF
U S Dept. of Commerce NOAA MESA	2/2/77	Yes	Yes	No				Not Required	No
U S DOT Coast Guard	2/9/77	Yes	No	No				Not Required	No
U S Navy	2/2/77	Yes	Yes	No				Not Required	No

COASTAL ZONE MANAGEMENT PROGRAM
LOCAL, REGIONAL & STATE LAND & WATER USE REGULATIONS IN THE
NASSAU/SUFFOLK COASTAL ZONE

Prepared by

Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787

Dr. Lee E. Koppelman
Project Director

15 June 1977

Task 5.1

Contract Number D93967

The preparation of this report was financially aided through a Federal grant from the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended. This report was prepared for the New York State Department of State.

Local, Regional and State Land and Water Use Regulations
in the Nassau/Suffolk Coastal Zone

The review of land and water use regulations affecting the management of the Nassau/Suffolk coastal zone in the CZM Year I report has been expanded in CZM Year II to include Nassau and Suffolk Counties zoning and subdivision review powers and more detailed information on regulations governing dunes and bluffs, stormwater drainage, wetlands, boating, oil spills, and flood hazard areas.

The following description of Nassau and Suffolk Counties zoning and subdivision review powers documents the counties roles in the direct application and/or the review of land use controls:

The Suffolk County Planning Commission reviews zoning changes and proposed subdivisions when they lie within one mile of a nuclear power plant or airport, or within a distance of 500 feet from:

- (1) the boundary of any village or town; or
- (2) the boundary of any existing or proposed county, state or federal park or other recreation area; or
- (3) the right-of-way of any existing or proposed county or state parkway, thruway, expressway, road or highway; or
- (4) the existing or proposed right-of-way of any stream, or drainage channel owned by the county or for which the county has established channel lines; or
- (5) the existing or proposed boundary of any other county, state or federally-owned land; or
- (6) the Atlantic Ocean, Long Island Sound, any bay in Suffolk County or estuary of any of the foregoing bodies of water.

The Suffolk County Planning Commission has conclusive review only on proposed subdivision and zoning changes that lie within 500 feet of a town or village boundary. In all other cases, the Suffolk County Planning Commission's review is advisory. Local governing boards with a majority plus one vote, can override the Suffolk County Planning Commission advisory review.

The Suffolk County shoreline review provision has been in operation for five years (since 1972). The New York State Department of Environmental Conservation also serves as a permit agency when a proposed subdivision is located in a tidal wetland area.

The Nassau County Planning Commission has conclusive subdivision review in all unincorporated areas. Incorporated villages conduct independent subdivision reviews. The Commission has advisory review functions in all of Nassau County for zoning changes that lie within a distance of 500 feet from:

- (1) the boundary of any village or town; or
- (2) the boundary of any existing or proposed county, state or federal part or other recreation area; or
- (3) the right-of-way of any existing or proposed county or proposed county or state parkway, thruway, expressway, road or highway; or
- (4) the existing or proposed right-of-way of any stream, or drainage channel owned by the county or for which the county has established channel lines; or
- (5) the existing or proposed boundary of any other county, state or federally-owned land.

In a court decision five years ago, Nassau County lost the conclusive review power for zoning changes that lie within a distance of 300 feet from the boundary of any village or town. Nassau County does not have review of zoning changes occurring within the shoreline area or near airports or power plants.

Regulations designed to protect such fragile coastal formations as bluffs and barrier beach dunes have been enacted by town and village governments on Long Island. However, the protection afforded the bluffs and dunes through local regulations is at best a piecemeal approach to the protection of these fragile coastal formations.

The varying types and degrees of dune and bluff regulations contained in municipal zoning and subdivision ordinances are portrayed in Table 1. Regulations governing the construction of dwellings or property containing barrier beach dunes varies from that of the Towns of Southampton and East Hampton, which require 100' setbacks from the crest of the primary dunes, to that of the Village of West Hampton Beach, which allows construction right up to the crest of the primary dunes provided that the bottom girders of the dwellings are elevated a certain specified number of feet above MHW. The towns and villages not listed in Table 1 have no regulations specifically dealing with dune and bluff protection.

Most municipalities having privately owned land fronting on the Atlantic Ocean have ordinances requiring that the construction of dwellings be setback a fixed distance from the crest of the primary dunes. Setback requirements for the construction of dwellings on the top edge of bluffs are rare on Long Island;

Table 1 (1 of 4)

Dune and Bluff Protection Regulations, Policies and Programs

I. Prohibits travel on beach dunes

- a. Prohibits vehicular traffic over dunes.
- b. Prohibits pedestrian traffic over dunes.
- c. Permits one access walkway over crest of dunes per dune front land owner.

II Dune maintenance, restoration, and building

- a. Requires dune front owners to plant beach grass and install snow fencing.
- b. Prohibits the uprooting or removal of any beach grass or natural growth, except poison ivy.
- c. Requires property owner to increase height of dunes across entire width of lot to a minimum 15' elevation by the addition of beach sand and clean fill.
- d. Municipality has a dune maintenance, restoration and/or building program.

III Prohibits construction of buildings and structures in the following designated waterfront areas:

- a. from ocean to 15' elevation contour;
- b. from MHW to a line 40' inland from a contour line nearest MHW and representing a 15' elevation above MHW;
- c. from crest of the 1st rank of ocean beach dunes to a line 100' inland from crest of the 1st rank of ocean beach dunes;
- d. from mean depth of dunes to a line 50' inland from mean depth of dunes;
- e. from lot line of waterfront property to a line 50' inland from lot line.

IV Prohibits construction of buildings and structures on bluff areas according to following setbacks:

- a. 100' from the top edge of the coastal bluff.
- b. 100' from MHW.

Dune and Bluff Protection Regulations, Policies and Programs

	I			II			III				IV*		
	a	b	c	a	b	c	d	a	b	c	d	e	a

Towns

Easthampton														
Southampton														
Southold														
Riverhead														
Brookhaven														
Smithtown														
Huntington														
Babylon														
Islip														
Hempstead														
N. Hempstead														
Oyster Bay														

Villages

Easthampton														
Southampton														
W. Hampton Beach														
Quogue														
Head of the Harbor														
Asharoken														
Saltaire														

Park Agencies

F.I. Nat. Seashore														
L.I.S.P.C.														
S.C. Parks Dept.														

*Most municipalities rely on rear yard setbacks as contained in municipal zoning ordinances. If additional setbacks are desired, individual municipal planning boards negotiate with developers.

Footnotes

- 1 requires a 100' setback instead of 40' setback.
- 2 applies from westerly boundary of Town of East Hampton to easterly boundary of Hither Hills State Park.
- 3 sand not to be taken from area between 15' contour and ocean.
- 4 requires 15' dune elevation for a setback depth of 50'.
- 5 applies to ocean frontage in Town of East Hampton from easterly boundary of Hither Hills State Park to the westerly boundary of U.S. Gov't. property at Montauk Point, except Subdivision Map #174.
- 6 Subdivision Map #174.
- 7 in partially developed Great South Beach areas no structures shall be built or altered so as to project beyond the average setback that has evolved in the vicinity.
- 8 can not use vehicles off paved roads or parking lots where signs are posted.
- 9 building department can issue building-permit resulting in removal of beach grass.
- 10 dune district extends from MHW inland to north toe of existing dunes or nearest structure (such as a road).
- 11 except for stairs, lookout platform or fence designed to hold or increase the dunes.
- 12 property owners can increase dunes with sand or clean fill but they are not required. Land or fill not to be taken from area between ocean and crest of dunes.
- 13 within 150' of the southerly edge of the beach grass along ocean.
- 14 requires 50' setback instead on 100' setback.
- 15 building setbacks from crest of sand dune vary according to height of bottom girders above mean water.

The bottom floor joists on all buildings shall not be less than a certain minimum of feet in height above the mean water mark of the Atlantic Ocean. Such required height above mean water is to be determined by measuring the distance from the crest of the sand dune, as hereinafter defined, to the nearest part of the building, and the following table sets forth such required heights and corresponding distances.

Distance from crest of sand dune
to nearest part of building

Required height of bottom
girders above mean water

230 feet or more	0 feet
215 feet to 229 feet	8 feet
200 feet to 214 feet	9 feet
185 feet to 199 feet	10 feet
170 feet to 184 feet	11 feet
155 feet to 169 feet	12 feet
140 feet to 154 feet	13 feet
125 feet to 139 feet	14 feet
110 feet to 124 feet	15 feet
95 feet to 109 feet	16 feet
80 feet to 94 feet	17 feet
65 feet to 79 feet	18 feet
50 feet to 64 feet	19 feet
35 feet to 49 feet	20 feet
20 feet to 34 feet	21 feet
0 feet to 19 feet	22 feet

Table 1 (4 of 4)

For the purpose of this ordinance, the term "Crest of sand dune", is defined to be the shortest straight line running between the east and west boundary lines of the property and passing through a point on the sand dune between said boundary lines which point marks the approximate average height of the sand dune above mean water at the time the construction of the building is commenced and which point is most distant from the southerly line of Dune Road.

- 16 applies to waterfront property on Stony Brook Harbor.
- 17 requires a 20' setback instead of 100' setback from dune crest line. Dune crest line in ocean front area shall be a line drawn parallel to the northerly boundary line of the plot from a point established as the highest median elevation above sea level encompassed by the building plot.
- 18 no boardwalks, decks, stiles, steps or other similar structures permitted from oceanfront lots to beach except erected by the village as natural extensions of dedicated village walks.
- 19 Code of Federal Regulations, Destruction of Natural Features.
- 20 L.I.S.P.C. policy; not regulation.
- 21 Islip encourages the use of existing walkway over dunes.
- 22 within 200 feet of the north line of the ocean beach.
- 23 Suffolk County Department of Parks, Recreation and Conservation policy; not regulation.

only 3 municipalities - Towns of Southampton and East Hampton, and Village of Head of the Harbor - were found to have regulations establishing bluff setbacks. Municipalities having no specific regulations for the construction of dwelling on bluffs usually rely on rear yard setbacks as contained in municipal zoning ordinances. If additional setbacks are desired by municipalities on land undergoing subdivision, town and village planning boards negotiate with the developers.

The listing and distribution of local stormwater drainage regulations shown in Table 2 was obtained primarily from municipal subdivision regulations. In Nassau County, the Department of Public Works establishes stormwater drainage specifications to which all municipalities (cities, towns, and villages) must conform. However, as in the case with the dune and bluff regulations, the various stormwater drainage regulations enacted by town and village governments in Suffolk County have produced a fragmented approach to the control of stormwater drainage on Long Island. It is interesting to note that the East End municipalities have the strongest regulations requiring stormwater to be recharged into the subsurface groundwater reservoir.

The preservation and protection of wetlands is of especial concern to the people of Long Island and has resulted in numerous local regulatory efforts; Table 3 summarizes these efforts. The past development pressures on these lands are reflected in the wide range of ordinances that have been formulated by each town in order to protect this valuable resource.

The towns of Hempstead and Oyster Bay have made attempts to manage wetland areas and to halt the large scale dredge and fill work so common a decade or two ago. These towns have entered into agreements with NYS for the management of wetlands and have acquired other tracts of land that are wholly or partially classified as wetlands.

Present laws regarding recreational boating on Long Island's coast vary greatly. Some areas have complex legislation, giving broad coverage to recrea-

Table 2 (1 of 3)

Storm Water Drainage Regulations

- A. All storm waters will be recharged into the subsurface groundwater reservoir.
- B. May require drainage facilities and easements for spring and surface waters.
- C. Must provide a storm water easement or drainage ROW if subdivision is traversed by a watercourse, drainageway, channel or stream.
- D. Drainage structures must accommodate potential runoff from its entire drainage area, whether inside or outside the subdivision.
- E. No storm water runoff or natural drainage water shall be so diverted as to overload existing drainage systems or create flooding or the need for additional drainage structures on other lands.
- F. All drainage problems within the limits of the development will be completely resolved by the design.

Table 2 (2 of 3)

Storm Water Drainage Regulations

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
<u>Towns⁷</u>						
Southampton	X					
East Hampton	X					
Southold	X	X	X	X		
Riverhead						
Shelter Island			X			
Brookhaven			X			X
Smithtown			X	X ¹	X	
Huntington	X ²		X			
Babylon				X ¹	X	
Islip	X ³					X
<u>Villages</u>						
Port Jefferson		X	X	X		
Southampton			X			
Sag Harbor	X					
North Haven			X			
Huntington Bay ⁶						
Quogue	X					
Westhampton Beach	X					
Bellport ⁴						X
Patchogue	X ³	X	X	X		
Lloyd Harbor			X			
Asharoken ⁵	X	X		X		
Northport	X ²		X			
Old Field		X		X	X	
Poquott		X				

Footnotes

1. Drainage structures must accommodate both storm water runoff and natural drainage water.
2. Storm water recharge basins shall be provided wherever there is no available outlet for storm water or where there exists a potential drainage problem. (All lawns or landscaped areas shall be swaled or dished to prevent storm water runoff from draining into adjacent property; leaching facilities shall be constructed in the low points-applies to the Town of Huntington.)
3. Storm water storage sumps will be used where natural runoff courses or systems are not available or adequate.
4. Follows drainage construction specifications of Town of Brookhaven.
5. Follows drainage construction specifications of Town of Huntington.
6. Follows subdivision regulations of Town of Huntington.
7. All municipalities (cities, towns and villages) in Nassau County must conform to Nassau County storm water drainage specifications administered by the Nassau County Department of Public Works. On individual basis, DPW analyzes subdivisions drainage plans according to such factors as:
 - a. topography
 - b. soil permeability
 - c. availability of existing drainage facilities.

Table 3 TIDAL WETLAND ZONING REGULATIONS

Government	Agency	Date Effective	Authority	Zone of Influence	Scope of Law	Regulation Name
State of N.Y. *	N.Y.S. DEC	9/1/73	Chapt. 790, Laws of '73	Defined wetlands & zone 300' therefrom or to 10' elevation	Permit	Tidal Wetlands Act
Suffolk	Planning	1/1/73	L.L. 28, 1972	500' of any tidal water	Review	Local law to amend charter re: Planning
Town of Babylon. Huntington Islip*	Health	1/1/73	Sect. 2, Art. VI	Defined subdivision development	Permit	Suffolk County sanitary code
	Town Board Conservation Advisory Council	6/30/70	L.L. #1-70	Defined wetlands and water courses	Permit	Marine Conservation Law
	Environmental Council Town Board	4/6/73	L.L. #2, 1973	Defined wetlands & water courses	Permit	Marine Conservation Law
Brookhaven	Town Board - Bd. of waterway & Nat. Resource	12/26/67	L.L. #2, 1967	Defined wetlands & water courses	Permit	Marine Law
Smithtown Riverhead Southampton*	Town Board - Conservation Advisory Council			Defined wetlands & water courses	Permit	Marine Law
	Town Board, Town Trustee	5/2/72	Ordinance #26	Defined wetland, ocean beach and flood plain	Permit	Tidal Wetlands & ocean beach Overlay district Tidal Flood Plain Overlay district
Easthampton	Bd. of Appeals Town Board - Town Trustees	6/26/70	Sect. 518 Zoning Ordinance	Defined flood plain & wetland and water courses	Permit	Excavation ordinance Flood and wetlands Preservation Ordinance
Shelter Island	Conservation Advisory Council	1/28/72	L.L. #24	Defined wetlands and water courses	Permit	Wetlands Ordinance
Southold	Conservation Advisory Council Town Trustees Board	7/17/73	Chapter 97	Defined wetlands	Permit	Wetlands Ordinance

* Regulations Mapped: N.Y.S. - 1975, Nassau Co. - 1976, Town of Islip - 1972, Town of Southampton

tional boating, while others have only general legislation. Table 4 represents most of the existing town and village regulations in the area of recreational boating. Enforcement of present laws is also in need of co-ordination. The Coast Guard, County Police and local Harbor Masters all enforce a variety of boating regulations.

Local statutes on boating regulations tend to have similar features in most areas, with only sporadic examples of variation. The incorporated village of Sands Point for example has developed extensive regulations for administration of a comparatively small area while the Town of Brookhaven, governing vast coastal areas, leaves recreational boating largely unregulated.

New York State navigation law, which regulates recreational boating, gives guidance to localities for development of boating regulations and establishes specific equipment and operation requirements.

An area of particular concern to the state is that of boating pollution. An interstate sanitation commission has been created to inhibit discharge of pollutants. Recently, an intergovernmental Boat Pollution Committee was formed to study and advise the New York State Department of Environmental Conservation on Marine sanitation devices. This committee has representatives from New York State D.E.C., Nassau County Department of Health, Suffolk County Department of Health, and N.O.A.A./M.E.S.A. New York Bight.

At the federal level, boating regulations concerning marine anchorage sites, equipment and safety requirements, and anti-pollution devices have been developed and are administered through the Department of Transportation and the Coast Guard. Federal standards do not always coincide with those of the State.

Enforcement is seen at all levels of administration. The Coast Guard has general powers, though they are most often found further offshore. Bays and harbors are patrolled by local authorities; County Police; and town and

CODE	DATE EFFECTIVE	SANITATION REGULATIONS	MOORING REGULATIONS	RESIDENCY FEES	BOATING REGULATIONS	ENFORCEMENT	REMARKS
TOWN OF NORTH HEMPSTEAD	CH. 69, 8/1/72 CH. 6 CH. 58	DISCHARGE OF POLLUTANTS AND CHANNELS PROHIBITED DESIGNATED AREAS	Prohibited near channels	Required - \$10.00 Yr	5 MPH speed limit near boat basin, dock, anchored vessel, 500 ft. limit of shoreline, no dangerous water sking after dark, 12 MPH general speed limit racing prohibited - NO SKIING IN 500 FT. AREAS (BOAT BASIN) AND 100 FT. FROM BOATERS	HARBOR PATROL & NC.P.D.	Extensive legislation - special attention paid to pollution and clean up operations. (THIS REFLECTS PROXIMITY TO New York City and pollution caused by the high population). MUTUALER REQUIRED
INC. VILLAGE OF SANDS POINT	CH. 4 30	DISCHARGE OF TOILETS PROHIBITED WITHIN 250 YDS. OF SHORE EXCEPT TREATMENT DEVICE	Prohibited near channels	Required	12 MPH general speed limit racing prohibited - NO SKIING IN 500 FT. AREAS (BOAT BASIN) AND 100 FT. FROM BOATERS	NC.P.D.	Very complete for a village. - TAKES OTHER LEVELS OF GOVERNMENT INTO ACCOUNT IN ITS STATUTES.
INC. VILLAGE OF GREAT NECK	§ 65	DISCHARGE OF TOILETS PROHIBITED IN CANAL, Docks, Bathing Areas	Prohibited 50 ft from channel - 100 ft from Village Dock	Required 12 hr. tie up at Village Dock	12 MPH limit in channel 4 MPH limit near docks 100 ft from boaters	Harbor Patrol	ANY VESSEL WHICH BECOMES A HAZARD TO NAVIGATION IS AUTHORIZED FOR REMOVAL. THIS REMOVAL IS FOUND IN MOST MUNICIPALITY STATUTES.
CITY OF GLEN COVE	CH. 4 7/1/74	DISCHARGE OF TOILETS PROHIBITED IN CANAL, Docks, Bathing Areas	Prohibited 50 ft from channel - 100 ft from Village Dock	Required	CAREFUL OPERATION NO DANGEROUS WAKE 4 MPH LIMIT - MOORING AREAS 12 MPH LIMIT - HARBOR	CITY - HARBOR PATROL	MOORING AREAS DESIGNATED BY COAST GUARD. LAWS VALID UNLESS IN CONFLICT WITH, NASSAU CO. N.Y. STATE, OR FEDERAL LAW.
TOWN OF HEMPSTEAD	CH. 105 ART. 2	DISCHARGE OF TOILETS PROHIBITED	MARINA QUALIFIABLE DESIGNATED MOORING AREA	NOT REQUIRED \$100.00	CAREFUL OPERATION NO DANGEROUS WAKE 4 MPH LIMIT - MOORING AREAS 12 MPH LIMIT - HARBOR	NC.P.D.	1 MARINA OPEN TO RESIDENTS ONLY - 1 FOR NON-RESIDENTS - CONSERVATION AND WATERWAYS DEPT. IN AUTHORITY
HEWLETT HARBOR				REQUIRED		NC.P.R. HEMPSTEAD DAY COASTABLE	TOWN OF HEMPSTEAD LAWS APPLY
HEWLETT NECK						NC.P.R. HEMPSTEAD DAY COASTABLE	TOWN OF HEMPSTEAD LAWS APPLY
INC. VILLAGE OF ATLANTIC BEACH						NC.P.R. HEMPSTEAD DAY COASTABLE	TOWN OF HEMPSTEAD LAWS APPLY
TOWN OF OYSTER BAY	CH. 5 3/10/70	BILLION PROHIBITED	LIMITED THEM REPORT CHANNEL - PERMIT REQUIRED INSPECTION REQUIRED NO DANGEROUS MOORING	REQUIRED	CAREFUL OPERATION - 5 MPH LIMIT NEAR DOCK MOORING CHANNEL SYSTEM OF MOORING Docks slow/no wake in mooring area - NO NIGHT SKIING	NC.P.D.	EXTENSIVE MOORING REGULATION - USCG. MARINE PARKING AREAS OBSERVED. TOWN BOARD DESIGNATED MOORING AREAS NO INTOXICATED OPERATION - NUMBER REQUIRED.
INC. VILLAGE OF BAYVILLE	CH. 2 CH. 9 7/76 7/74	DISCHARGE OF TOILETS PROHIBITED	VILLAGE MOORING IN DESIGNATED AREA Permit Required	REQUIRED 15 min. tie up at Village Dock	5 MPH LIMIT NO DANGEROUS WAKE NO INTOXICATED OPERATION NO NIGHT SKIING NO SKIING IN CREEK	HARBOR PATROL	SKIING PROHIBITED 200 FT. OF BEACH, MOORING, OR BOATING VILLAGE BOARD AND MOORING COMMITTEE HAVE EMPLOYMENT AUTHORITY.
INC. VILLAGE OF OYSTER BAY COVE				REQUIRED		NC.P.R.	EXHAUST MUFFLER REQUIRED
							TOWN OF OYSTER BAY REGULATIONS APPLY

Table 4 Boating Regulations (1 of 3)

	CODE	DATE EFFECTIVE	SANITATION REGULATIONS	HOOKING REGULATIONS	RESIDENCY ?	FEES ?	BOATING REGULATIONS	ENFORCEMENT	REMARKS
INC. VILLAGE OF SEA CLIFF	326	7/6/57	DISCHARGE OF TOILETS PLUMBING IN DUES OR BASIN DUMPING OF POLLUTION PROHIBITED	MISLING AT EDGE OF CHANNEL NO CLEARER THAN 50 FT	REQUIRED		CAREFUL + PROUDENT OPERATION NO DANGEROUS WAKE 12 MPH IN CHANNEL / 5 MPH. NEAR DOCK	NCRD.	MUFFLER REQUIRED 12 hrs tie up to PUBLIC DOCK
INC. VILLAGE OF COVE NECK					REQUIRED			NCRD	T.O.B. REGULATIONS APPLY
INC. VILLAGE OF LAUREL HOLLOW	2711		CHEMICAL TREATMENT OF WASTE WITHIN 1500' TO 5000' RANGE	DIRTY REQUIRED POLLUTED: WITHIN 100' OF DOCK, NEAR CHANNEL	REQUIRED		5 MPH. SPEED LIMIT CAREFUL OPERATION NO INTENSIFIED OPERATION		MUFFLER REQUIRED EXTENSIVE EQUIPMENT AND MOORING REQUIREMENTS CH. 21 ESTABLISHES A HARBOR AND BOATING ADVISORY COUNCIL - COMPLETE LAW
TOWN OF HUNTINGTON	CH 22	4/1/70	DUMPING REGULATIONS FILETS MAY BE DISCHARGED BEHIND 1500 FT	DESIGNATED AREAS PERMIT REQUIRED	RESIDENTS \$100 PR. NON-RESIDENTS \$1000 PR. LAUNCH		5 MPH IN HARBOR NO INTENSIFIED OPERATION CAREFUL AND PROUDENT OR NO NIGHT SKIING.	DAY CONSTABLE SC.P.D.	TOWN OF HUNTINGTON REGULATIONS APPLY
INC. VILLAGE OF HUNTINGTON BAY					REQUIRED				
TOWN OF BABYLON	CH 6	1/1/68	DISCHARGE OF TOILETS PLUMBING IN BASIN REFUSE DUMPING PROHIBITED	NO DUMPING CHANNEL PERMIT REQUIRED	REQUIRED		CAREFUL + PROUDENT OPERATION 5 MPH IN CHANNEL + BAY	SC.P.D.	
TOWN OF SMITH TOWN	CH 25 CH 52	4/20/55 5/1/60	DISCHARGE OF TOILETS PLUMBING IN BASIN REFUSE DUMPING PROHIBITED	DESIGNATED AREAS PROHIBITED: 500' OF CHANNEL 100 FT OF PUBLIC DOCK PERMIT REQUIRED	REQUIRED		5 MPH IN HARBOR OR NUSSEQUEUNE RIVER. PROHIBITED NEAR BEACHES	SC.P.D. HARBOR WATER	BERTHING AND MOORING CONTROLLED BY TOWN PARKS AND BEACHES DEPT. LONG BEACH - NUSSEQUEUNE RIVER MOORING AREA
TOWN OF ISLIP	337 HAT 2		NO WASTE DISCHARGE	DESIGNATED mooring Permit required for mooring or moorage use	REQUIRED		CAREFUL + PROUDENT OPERATION - NO DANGEROUS WAKE - NO INTENSIFIED NO NIGHT SKIING	SC.P.D. HARBOR	EXTENSIVE MARINA REGULATIONS - USCG. EQUIPMENT requirements reinstated NO MOTORBOATS ON LAKE RONKONKOMA
TOWN OF BROOKHAVEN	CH 8 CH 22			Designated Areas MOORING DONE PROUDENTLY	Required			DAY CONSTABLE SC.P.D.	MUFFLER REQUIRED TOWN HAS LITTLE REGULATION REGARDING RECREATIONAL BOATING - FIVE TOWN MARINAS - SEVEN YEAR WAITING LIST ON NORTH SHORE, FIVE YEAR WAITING LIST ON SOUTH SHORE
INC. VILLAGE OF PATCHOGUE	CH 91		LITTERING PROHIBITED	PERMIT REQUIRED NO INTERFERENCE WITH CHANNEL	REQUIRED 12 hr. tie up		CAREFUL + PROUDENT NAVIGATION NO DANGEROUS WAKE NO 4 MPH SPEED LIMIT NO OPERATION (WAKE) NEAR PUBLIC DOCK	SC.P.D.	NO MOTOR (OR MECHANISM CAPABLE OF MAKING SOUND) AT NIGHT EXCEPT TO GET UNDER WAY. MUFFLER TO NAVIGATION MUST BE REMOVED WITHIN (48) HOURS. MUFFLER REQUIRED
INC. VILLAGE OF Port Jefferson									NO MOTORBOATS ON INLAND WATERS

Table 4 Boating Regulations (2 of 3)

village Bay Constables and Harbor Patrols. The numerous local boating regulations and the overlapping jurisdictions of the above mentioned enforcement agencies, illustrate the need for standardizing boating regulations and coordinating enforcement of these regulations among the various enforcement agencies.

Local, State and Federal oil spill contingency plans, regulations and ordinances contained in NSRPB's Catalogue of Plans, Regulations, and Programs that are Relevant to OCS Development Activities, which was prepared under Task 4.2 of the Board's OCS contract with New York State, are listed below:

LOCAL OIL SPILL CONTINGENCY PLANS, REGULATIONS AND ORDINANCES

Great Neck Code. Article II, Section 180-2. May 1, 1962, Amended May 15, 1964.

Of local interest. This ordinance makes it unlawful for any person being the owner or driver of a motor vehicle being used for the transportation of oil or oil products to spill or release oil on any street or sidewalk within the village. The ordinance requires the immediate cleanup of the spill.

Great Neck Code. Article II, Section 65-4.

Of local interest. This ordinance prohibits the dumping of oil in boat channel systems.

Code of the Town of Hempstead. Chapter 164, Section 9. February 5, 1968.

Of local interest. The ordinance prohibits the dumping or depositing of petroleum or petroleum products in any waterway under the jurisdiction of the Town of Hempstead. Bay Constables and other peace officers are authorized to enforce this ordinance. The Town is presently in the process of developing a new ordinance concerning the discharge of petroleum in Town waterways.

Town of Huntington. Oil Spill Ordinance. 1971. Local law number 7-71, Section 60-31, 60-32.

Of regional interest. The Town of Huntington has an Oil Spillage Control Board which was established in compliance with Section 60-31 of local law number 7-71. This Board is the organization through which the Town of Huntington coordinates its response to local pollution incidents. The Board is empowered to issue permits for oil handling oper-

ations; to enter into agreements with "Federal or State agencies or other municipalities, oil terminal facilities, groups or other interested persons for the purpose of coordinating and jointly using such equipment and material and personnel" to combat oil pollution; to create an oil pollution fighting fund by requiring "that the owner, operator, charterer, leasee, or other person who shall unload or cause to be unloaded, any liquid fuel, oil or other solvent, shall pay the sum of one mill per every five gallons" of oil handled; to establish an oil pollution team for purposes of implementing local oil pollution control actions; and to assist the United States Coast Guard, under the direction of its On-Scene Coordinator, in pollution control efforts for local spills. The powers of the Board have been hampered, at the present time, by litigation initiated by the affected oil companies. The Board has since been dissolved and its powers are now assumed by the Commissioner of the Huntington Department of Environmental Protection. The Town has accumulated approximately \$100,000 in the oil pollution fighting fund. The Town has refused to spend the funds until the litigation is resolved.

Proposed Amendment to the Suffolk County Charter: Article I-A Environmental Preservation Act, Title 105, Hazardous Materials Control. 1975.

Of regional interest. Title 105 of the proposed charter amendment is not a contingency plan but calls for, among other things, the establishment of procedures and deterrents to prevent the accidental or unnecessary release of hazardous materials and to ensure prompt and effective remedial measures in the case of such release. The proposed charter amendment requires a manufacturer, transporter or user etc. to "have on hand and to emplace or deploy devices or facilities...to prevent or control the accidental or unnecessary release or spread of said hazardous material." The Commissioner of the Suffolk County DEC may order any person contributing to the unlawful release of a hazardous material to undertake cleanup operations. This proposed amendment was not placed on the ballot for the November 1975 elections.

Islip Code. Article 1, Section 66. Discharge of Effluents into Waterways. March 4, 1975.

Of local interest. The ordinance prohibits the discharge of oil and other pollutants into the waters within the jurisdiction of the Town of Islip. An offense is punishable by a fine of not more than \$300.

North Hempstead Code, Chapter 69, Section 5, Waterways Sanitation. August 24, 1971.

Of local interest. This ordinance prohibits the discharge of petroleum products from any vessel, boat or terminal facility into the waters or waterways within the jurisdiction of the Town of North Hempstead. It requires that vessels carrying oil have oil booms on board and that oil booms also be stored at appropriate locations along the oil docks.

The discharger is required to immediately undertake to remove the spilled oil. The ordinance also requires that the Town be reimbursed for the use of its personnel and equipment to remove the spillage. An offender may receive a special fine not exceeding \$10,000 or imprisonment for a period not exceeding one year, or both.

Oyster Bay Code. Article III. Licensing of Oil Storage Facilities and Regulating the Discharge, Handling and Use of Oil.

Of local interest. The ordinance prohibits the discharge of oil onto any public or private land or water within the Town. It also prohibits oil drilling in the shoreline area and in all waters and land underwater within the jurisdiction of the Town. The statute makes it unlawful for any person to construct, operate, or maintain an oil terminal facility within the Town without a permit. The permit requires the following information:

- a. the address and location of the facility
- b. quantity and type of oil to be stored
- c. total capacity of the tanks
- d. a plot plan showing the location of all improvements and facilities required
- e. a scale diagram showing the manner in which oil retention booms shall be deployed

The statute requires that all oil terminal facilities be inspected annually.

The Town has yet to implement that section dealing with oil terminal facility permits and inspection.

The Town has an oil spill contingency plan that has been described by Town officials as a "not too useful document". That plan is being revised.

The Town also has an informal agreement with the Audubon Society to use the facilities at the Theodore Roosevelt Bird Sanctuary to store equipment used in the cleaning of oil soaked birds.

Port Jefferson Code. Article XXI. Tank Vessel Operations: Port Jefferson Harbor. October 5, 1970.

Of local interest. This ordinance prescribes regulations for the bulk handling and use of petroleum products being loaded or discharged by tank vessels in that portion of Port Jefferson Harbor coming under the jurisdiction of the Village of Port Jefferson. It permits the fire inspector to inspect vessels handling oil. Should a fire safety violation be found, the inspector may order the vessel to suspend cargo transfer operations. The ordinance stipulates numerous requirements that must be met prior to movement of cargo. It appears to be a very comprehensive

oil spill prevention/safety ordinance. The ordinance prohibits the discharge or escape of oil from any vessel into Harbor waters.

Port Washington Water Pollution Control District. Sewer Use Ordinance. 1976.

Of local interest. This ordinance prohibits the discharge into any building sewer or any portion of the wastewater facilities of the district wastewater containing more than 25 milligrams per liter of petroleum oil. This ordinance, although unenforceable, serves to point out the problem of dumping of small quantities of oil by home owners. Community oil dumping facilities may have to be made available to alleviate this problem.

Incorporated Village of Sea Cliff. Ordinance I, Section 26, Sub-division 6. July 6, 1959.

Of local interest. The dumping of oil in all waters, waterways and waters adjacent to bathing areas or shellfish beds is prohibited.

STATE OIL SPILL CONTINGENCY PLANS, REGULATIONS AND ORDINANCES

New York State Department of Environmental Conservation, Division of Pure Waters, Bureau of Water Quality Management, Water Quality Surveillance Section, New York State Water Quality Accident Contingency Plan. 1972.

Of regional interest. This is an interagency document which has not yet been implemented. The New York State Contingency Plan is applicable to all state waters including inland streams and lakes, coastal waters, and the contiguous zone where there exists a threat to State waters. The State plan provides for the coordination and delineation of the responsibilities and actions of participating agencies in dealing with water quality accidents. It establishes a Water Quality Accident Committee, a State Response Center, a State Response Team, Regional Response Centers and Teams. State pollution control efforts are directed and coordinated at the scene of a pollution incident by an On-Scene Coordinator. There is no special State pollution fund to help defray the costs associated with State pollution control operations.

State of New York, Senate Bill 7989, Amendment to the Navigation Law, Article II-A, Oil Spill Prevention and Control, February 24, 1976.

The bill prohibits the discharge of oil, petroleum products, their by-products, and other pollutants into or upon any coastal waters, estuaries, tidal flats, beaches and lands adjoining the shorefront.

Every owner or operator of a terminal facility would be required to obtain a license. The Department of Transportation would issue a license upon the showing that the registrant can provide all necessary equipment to prevent, contain and remove discharges of oil.

The department would be authorized to adopt regulations including but not limited to the following matters:

1. Operating and inspection requirements for facilities, vessels, personnel and other matters relating to license operations.
2. Procedures and methods of reporting discharges and other occurrences.
3. The port manager would have the authority to board any vessel prior to its entry into port in order to ascertain the seaworthiness of the vessel and the presence of required containment gear.
4. Development and implementation of criteria and plans to meet oil, petroleum, and other pollution occurrences of various kinds and degrees.
5. Requirements for minimum weather and sea conditions for permitting a vessel to enter port and for the safety and operation of vessels, barges, etc.

Any person discharging pollutants would be required to immediately undertake to remove such discharge to the department's satisfaction. The Bill would require the department to establish and maintain at such ports within the state such employees and equipment as in its judgment may be necessary to remove a discharge.

The Bill has not yet been enacted into law.

FEDERAL OIL SPILL CONTINGENCY PLANS, REGULATIONS AND LEGISLATION

Comprehensive Oil Pollution Liability and Compensation Act of 1976. H. R. 4862, 94th Congress, 2nd Session. July 26, 1976.

Of general interest. This Bill provides a comprehensive system of liability and compensation for oilspill damage and removal costs. Claims for damages for economic loss, arising out of or directly resulting from oil pollution, may be asserted for removal costs; injury to or destruction of, real or personal property; loss of use of real or personal property; injury to or destruction of, natural resources; loss of tax revenue for a period of one year due to injury of real or personal property. A fund of \$200 million would be established to cover the claims mentioned above. The Bill provides for the establishment of regulations pertaining to financial responsibility, presentation of claims responsibilities of owners and operators and the collection of fees. The Bill also requires the Secretary of the Treasury to collect from the owners of terminals a fee not to exceed three cents per barrel of oil received. The monies collected are to be placed in the fund.

Council on Environmental Quality, National Oil and Hazardous
Substances Pollution Contingency Plan, August 1971.

Of general interest. The national plan establishes a multi-agency organization called the National Response Team (NRT) composed of nine Federal agencies responsible for the coordination and functioning of this plan. The NRT serves two functions. It is charged with pre-spill planning and readiness, and also operates as an emergency pollution response team. The National Plan requires the formation of Regional Response Centers and Regional Response Teams to be located throughout the country. For the Long Island Sound area there are four such response centers and teams. An important feature of the National Plan is the provision for a \$35 million pollution revolving fund which is used to defray the costs associated with Federal pollution response operations.

Since the National Flood Insurance Program, administered by the Flood Insurance Administration (FIA), may well influence the construction and reconstruction of dwellings on high hazard coastal areas, a brief review of the program and its status on Long Island follows.

The FIA conducts preliminary investigations of the Bi-County Region to demonstrate which communities must be in the Flood Insurance Program. Once the above determination is made the communities will enter the Emergency Program upon application. The communities must document the legal authority to control land use and adopt preliminary land use control measures according to FIA regulations. The community must delineate flood prone areas and must document the history of flood experience.

FIA will then develop Flood Insurance Rate Maps for each community. Once the Flood Insurance Rate Map is completed the community has 6 months in which it must enact the necessary land use regulations to comply with the FIA regulations to enter into the regular program. To date, approximately 14 communities are in the regular program in the Bi-County Region.

Should a community not enact the necessary ordinances and regulations within 6 months of the completion of the Flood Insurance Rate Map the community will be suspended from the program. It will be denied Federally assisted funds, such as mortgage loans or guarantees to property owners located in flood hazard areas. It will also be denied Federal assistance for permanent restoration work.

The State of New York is empowered to enroll communities in the regular program. Should a community, therefore, not enter the regular program, the State will then adopt the necessary land use regulations for that community and issue its building permits.

The Flood Insurance Administration has established new regulations for entry into the Flood Insurance Program. Therefore, by June 1st, 1977 those communities in the regular program must amend their regulations to conform with the new FIA regulations.

In the context of coastal zone management, there is cause for concern about the impacts of the National Flood Insurance Program, particularly in those areas which are identified as coastal high hazard areas, the V Zones on the FIA's rate maps. (When the FIA's rate studies are finally completed, it can reasonably be anticipated that all of the barrier beaches and dunes on the south shore from westernmost Nassau to easternmost Suffolk will be classified as coastal high hazard areas). The cause of the concern is that the availability of flood insurance in such inherently hazardous areas substantially reduces the financial risks of property owners, tends to increase the value of property and of structures placed in such areas, tends to sustain already high demand for such properties, and tends to reduce the effectiveness of flood plain management techniques in the area. The concern is substantiated also by the greater than normal potential for high percentages of structural damage to residences and other building in such areas, as evidenced by past hurricane and erosion experience. The suspect quality of technical information on coastal surges, and the suspect adequacy of measures to elevate and anchor residential structures exposed to storm-driven waves, are additional concerns for singling out coastal high hazard areas for particular concern and management attention.

COASTAL ZONE MANAGEMENT PROGRAM
METHOD TO ASSURE THAT REGIONAL LAND AND WATER
USES ARE NOT ARBITRARILY OR UNREASONABLY RESTRICTED
OR EXCLUDED BY LOCAL LAND AND WATER USE REGULATIONS

Prepared by

Nassau-Suffolk Regional Planning Board
H. Lee Dennison Office Building
Veterans Memorial Highway
Hauppauge, N.Y. 11787

Dr. Lee E. Koppelman
Project Director

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Task 5.1

Contract Number D93967

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D R A F T

Activity 5-L

The remainder of this memorandum concerns the requirement for assurance that land and water uses that are of more than purely local significance are not arbitrarily or unreasonably restricted or excluded by local land and water use regulations:

The coastal zone study has identified various water related uses that are important to the economy of the Nassau-Suffolk region or are facilities of regional importance to the population. These include sites for power generation, sewerage treatment, sand and gravel mining, the importation of stone and related products, the importation and storage of petroleum products and landing and maintenance facilities for commercial fishery operations. In addition, regional recreation facilities, such as beach or marinas, launching ramps and fishing piers, are included along with commercial resort facilities.

There are sites available in the bi-county area for all of the above shore-front activities. Other regional uses, such as a deep water port, or certain of the support facilities for outer continental shelf activities, such as a refinery, cannot be accommodated because of a lack of deep water or other land use compatibility considerations.

The regulations of all of the 110 local municipalities have been reviewed and their relationship to coastal zone activities have been assessed in Item 5-K. The local restrictions are included in zoning and subdivision ordinances, building codes and local laws dealing with items such as dredging, erosion, oil spillage and boating activities.

At the present time, many of the local ordinances would restrict the establishment of needed regional activities in the coastal zone. Therefore, a county, regional or state override of a local disapproval will be necessary in order to provide certain facilities. Since G.A.P.C.s that have been identified encompass the sites that are suitable for regional activities, the

override could be confined to these designated locations.

Many of the local municipalities were found to have a limited number of ordinances or regulations concerning dredging, or construction on the waterfront. However, all have zoning, subdivision and building permit requirements so that the required override will have to cover these latter areas, but may not be necessary for the former items which are usually subject to federal, state and county regulations.

Comprehensive plans of the local municipalities that were reviewed under 3-I indicate that many of the municipalities do take into account the need for regional facilities in their planning effort. Usually the consideration is in the area of resort facilities, recreational activities, fishery operations, oil storage and the importation of sand and gravel. On the other hand, sites for additional power generating facilities and sewage treatment plants are lacking in the individual plans. In some cases, the local plans provide for a certain regional type of activity while the current zoning ordinance prohibits such activity. The reason for this is often that the latest comprehensive plan was prepared for a previous administration. The current administration may or may not accept the plan proposals as prepared by a planning consultant for an earlier governing body. In these cases, our evaluation as to the local acceptance of the plan would be used as input in determining the desirability in establishing certain regional facilities that might not be in accord with current zoning or subdivision regulations.

The Coastal Zone Management Legislation requires that a management program contain "adequate consideration of the national interest in the siting of facilities necessary to meet requirements which are other than local in nature." 306FWPCA, Sec. a(8). That it provide "for a method of assuring that local land and water use regulations within the coastal zone do not unreasonably restrict or exclude land and water uses of regional benefit." 306FWPCA, Sec. c(2). The regulations, which elaborate on the legislation and provide further guidance for planning agencies, call for an analysis of State needs and a determination of "the capability and suitability of meeting these needs in specific locations in the coastal zone." 923.14FWPCA, Sec. b(1 and 2).

The Nassau-Suffolk Regional Planning Board has attempted, insofar as possible, to identify and plan for the siting of facilities to meet national, state, and regional needs that can be accommodated within Long Island's coastal zone.

The identification of needs has been accomplished through a review of numerous governmental reports and studies dealing with such subjects as dredging, deep water ports, outer continental shelf exploration and development, water resources, wetlands and recreation. At the same time, a continuing dialogue with Federal and New York State agencies has facilitated Planning Board awareness of current thinking.

While it may be possible to quantify national and state needs, at least in broad terms, there is no easy environmentally acceptable way to apportion responsibility for meeting these needs among State and sub-state agencies. Since the capability and suitability of the resource base are legitimate concerns, the Nassau-Suffolk approach has been to determine the site, utility, and transport requirements associated with the projects intended to meet the needs and to identify and designate as G.A.P.C.s any presently or potentially able to accommodate them.

COASTAL ZONE
INFORMATION CENTER

